

Prevention of Research Misconduct

Basic RCR Program for Graduate Students

Issued April.2024

Research Ethics and Integrity Promotion Office ,
Hiroshima University

(in cooperation with Writing Center , Hiroshima University)



HIROSHIMA UNIVERSITY

For attendees

As long as they conduct research such as undergraduate theses or master/doctoral theses, students are considered **researchers (scientists)**, just like faculty members. Hence, students are responsible as researchers.

What is a researcher's responsibility?

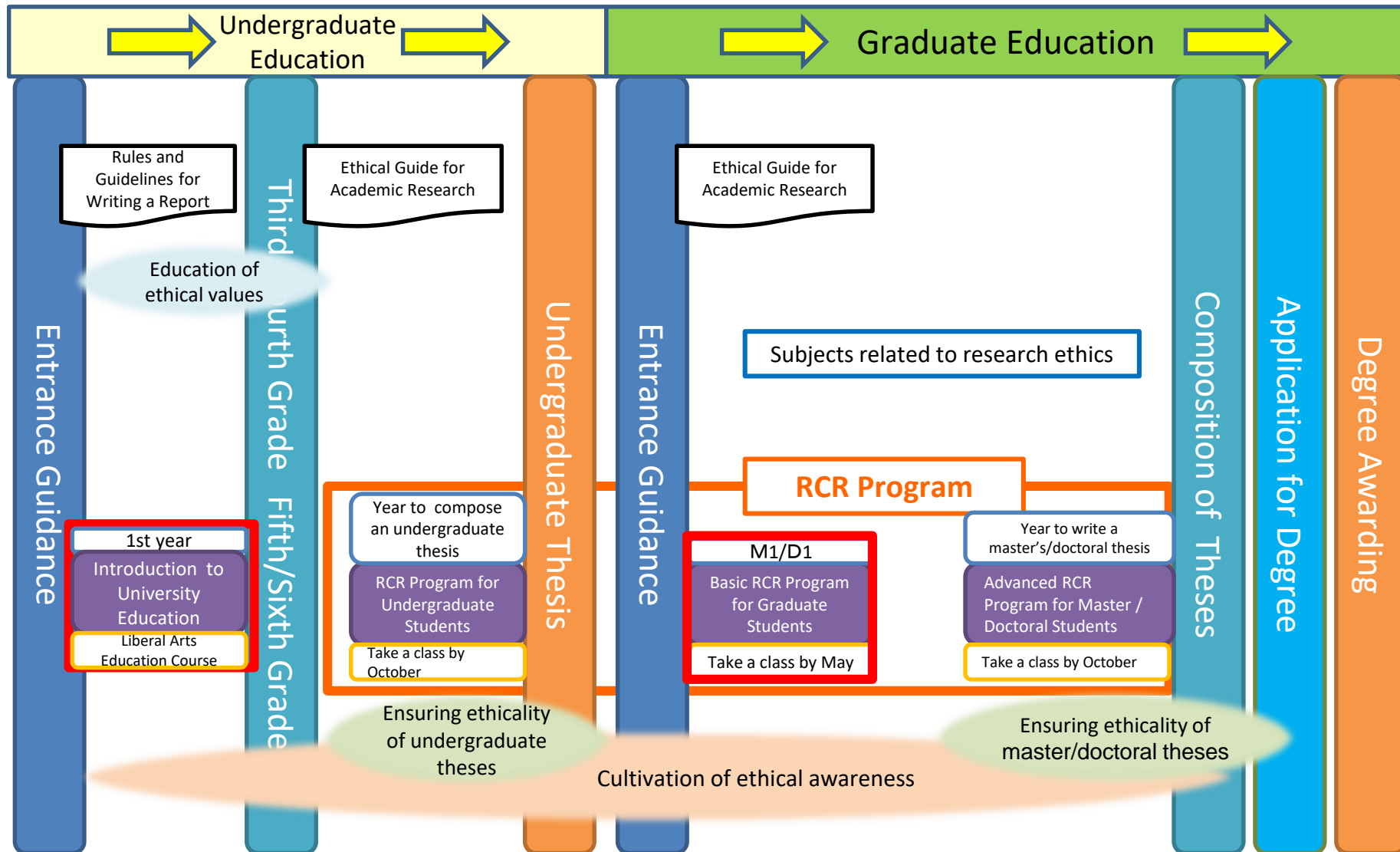
To use their intellect to make new discoveries, and to meet society's expectations in solving various social issues.

For attendees

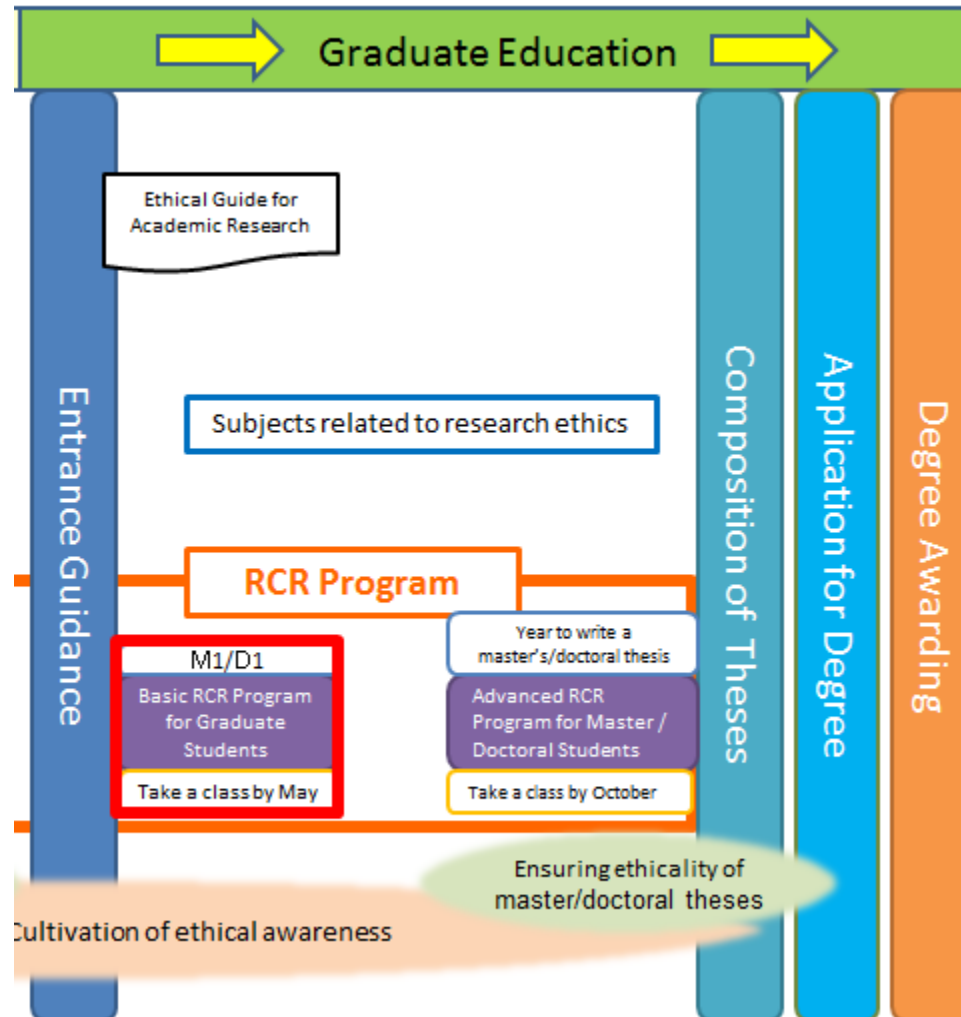
Purpose of this training session

To acquire the basics of the research ethics necessary for fulfilling the responsibilities expected of researchers, in order to implement sound research practices.

(For student)



Research Ethics Education at HU (For graduate student)



Contents

1. Responsible Conduct of Research (P.9~)
 - 1.1. What is a Responsible Research Activity? (P.10~)
 - 1.2. Misconduct in Research Activities (P.14~)
 - 1.3. Improper Use of Research Funds (P.42~)
 - 1.4. Data Handling (P.57~)
 - 1.5. Presenting Research Results (P.105~)
2. Norms and Rules of Scientists at Hiroshima University (P.141~)
3. Actual Case of Misconduct at Hiroshima University (P.149~)

Contents

1. Responsible Conduct of Research (P.9~)
 - 1.1. What is a Responsible Research Activity? (P.10~)
 - 1.2. Misconduct **Never allowed as researcher** (P.14~)
 - 1.3. Improper Use of Research Funds (P.42~)
 - 1.4. Data Handling (P.57~)
 - 1.5. Presenting Research Results (P.105~)
2. Norms and Rules of Scientists at Hiroshima University (P.141~)
3. Actual Case of Misconduct at Hiroshima University (P.149~)



1. Responsible Conduct of Research



1. Responsible Conduct of Research

1. 1.

What is a Responsible Research Activity?

For the Sound Development of Science -The Attitude of a Conscientious Scientist-
Section I What Is a Responsible Research Activity ?

1. Responsible Conduct of Research

1. 1. What is a Responsible Research Activity?

- Apply honesty and integrity in their decision-making and behavior
- Maintain and improve their expert knowledge, abilities, and techniques
- Do whatever they can to scientifically verify the validity and accuracy of the knowledge obtained through their research.

Hereafter, quotations from “For the Sound Development of Science” available online are indicated (Green Book Text PO)

(Green Book Text P12)



1. Responsible Conduct of Research

1. 1. What is a Responsible Research Activity?

- Fulfill the responsibilities of scientists
(referred to on p.11)
- During this process, fulfill society's expectations and hopes regarding the proper use of public research funds

1. Responsible Conduct of Research

Behaviors that are not permitted for researchers

1. 2. Misconduct in Research Activities

1. 3. Improper Use of Research Funds



1. Responsible Conduct of Research

1. 2.

Misconduct in Research Activities

For the Sound Development of Science -The Attitude of a Conscientious Scientist-
Section I What Is a Responsible Research Activity ?



1. Responsible Conduct of Research

P36)

Diovan Scandal in 2012

1. 2 Misconduct in Research Activities

- Multiple university hospitals participated in clinical research on “Diovan,” a drug for treating high-blood pressure. It was alleged that, when each hospital conducted its own research, **numerical data such as the subjects’ blood pressure and statistics were manipulated** in such a way that the conclusion would be advantageous to a certain pharmaceutical company.
- After the misconduct was exposed and made public, their research paper was retracted.
- The former hospital employee involved in the data fabrication and falsification and an employee of the pharmaceutical company which used that invalid paper to advertise the medicine were prosecuted for exaggerated advertisement prohibited by the Pharmaceutical Affairs Law.

Retracted

Effective and mortality in uncontrolled hypertensive patients with high cardiovascular risks: KYOTO HEART Study

Takahisa Sawada^{1*}, Hiroyuki Yamada¹, Björn Dahlöf², and Hiroaki Matsubara¹ for the KYOTO HEART Study Group

¹Department of Cardiovascular Medicine, Kyoto Prefectural University School of Medicine, Kajicho 465, Kamigyo-ku, Kyoto 600-8546, Japan; and ²Department of Medicine, Sahlgrenska University Hospital, Östra, Göteborg, Sweden

Received 4 August 2009; accepted 13 August 2009; online publication ahead of print 31 August 2009

See page 2427 for the commentary on this article (doi:10.1093/eurheartj/ehp364)

Aims The objective was to assess the add-on effect of valsartan on top of the conventional treatment for high-risk hypertension in terms of the morbidity and mortality.

Methods and results The KYOTO HEART Study was of a multicentre, Prospective Randomised Open Blind endpoint (PROBE) design, and the primary endpoint was a composite of fatal and non-fatal cardiovascular events (clinicaltrials.gov NCT00149227). A total of 3031 Japanese patients (43% female, mean 66 years) with uncontrolled hypertension were randomized to either valsartan add-on or non-ARB treatment. Median follow-up period was 2.7 years. In both groups, blood pressure at baseline was 157/88 and 133/76 mmHg at the end of study, compared with non-ARB arm, valsartan add-on arm had fewer primary endpoints (83 vs. 155; HR 0.55, 95% CI 0.42–0.72, P = 0.00001).

Conclusion Valsartan add-on treatment to improve blood pressure control prevented more cardiovascular events than conventional non-ARB treatment in high-risk hypertensive patients in Japan. These benefits cannot be entirely explained by a difference in blood pressure control.

Keywords High-risk hypertension • Angiotensin receptor blockers • Cardiovascular mortality–morbidity • Valsartan

Introduction

Cardiovascular disease is the leading cause of mortality worldwide.¹ Hypertension is the most common cause of coronary heart disease and heart failure in Japan; however, cerebrovascular disease is still more prevalent in Japan than in Western societies.² The percentage of cerebral bleeding is two or three times greater than in white people, and cerebral infarction is mostly caused by lacunar-type ischaemic stroke due to hypertensive small vessel disease.³

The renin-angiotensin system (RAS) plays a major role in the homeostasis of blood pressure, electrolytes, and fluid balance.⁴ However, chronic activation of RAS contributes to the development of hypertension and cardiovascular organ damage.⁵ Numerous trials have investigated the benefits of ACEI, e.g. The Heart Outcomes Prevention Evaluation (HOPE) Study reported that

ACE inhibitors significantly reduced mortality, myocardial infarction, and stroke in high-risk patients.⁶ Another important study, in this case with ARB, was the Losartan Intervention for Endpoint reduction in hypertension study, where losartan-based therapy prevented more cardiovascular morbidity and death, in particular stroke, than atenolol-based regimen despite similar blood pressure control.⁷ There are now numerous studies showing beneficial effects of RAS blockers on cardiovascular outcomes, in particular with ARBs, in various stages of the CV continuum.⁸ However, these studies have included as maximum a few percent of Asian patients in general and very few Japanese in particular.

Cardiovascular disease incidence in Japan differs from those in Western countries. CAD mortality is one-third of that in the USA, and cerebrovascular disease mortality is ~1.5 times higher than in the USA.⁹ The dietary habits in Japan differ from

* Corresponding author. Tel: +81 75 251 5511, Fax: +81 75 251 5514, Email: sawada@koto.kpu-m.ac.jp

Published on behalf of the European Society of Cardiology. All rights reserved. © The Author 2009. For permissions please email: journals.permissions@oxfordjournals.org

Source: European Heart Journal
Website
<http://eurheartj.oxfordjournals.org/content/ehj/30/20/2461.full.pdf>

1. Responsible Conduct of Research

1. 2 Misconduct in Research Activities

STAP Cell Scandal in 2014

- In January 2014, the RIKEN center made an announcement about the creation of STAP cells. Two articles related to the cells appeared in Nature.
- Soon after the announcement, various questions were raised, including about the data supporting the claim. RIKEN's investigative committee confirmed the fabrication of images in the first article and, for the second paper, manipulation of DNA fragment images. The two articles were withdrawn.
- After that, misconduct was also found in the scientist's doctoral thesis, a university that awarded the degree revoked the doctorate after recognizing 11 points of misconduct, such as plagiarism, etc.

STAP retracted

Two retractions highlight long-standing issues of trust and sloppiness that must be addressed.

This week, *Nature* publishes retractions of two high-profile papers that claimed a major advance in the field of stem cells (see page 112). Between them, the two papers seemed to demonstrate that a physical perturbation could do what had previously been achieved only by genetic manipulation: transform adult cells into pluripotent stem cells able to differentiate into almost any other cell type. The acronym STAP (stimulus-triggered acquisition of pluripotency) became instantly famous.

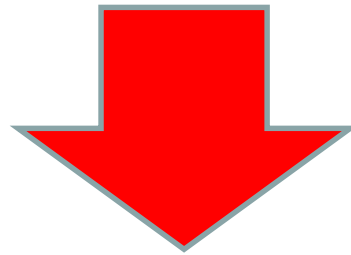
Soon after the papers were published on 30 January, cracks appeared

Source: *Nature*, 511, 3 JULY, 5 (2014)

1. Responsible Conduct of Research

1. 2. Misconduct in Research Activities

What the extent of the reporting of these incidents shows:



- Those media reactions show society's high expectations to science technologies and scientists.
- Scientists are responsible for responding to such expectations.

1. Responsible Conduct of Research

18

1. 2. Misconduct in Research Activities

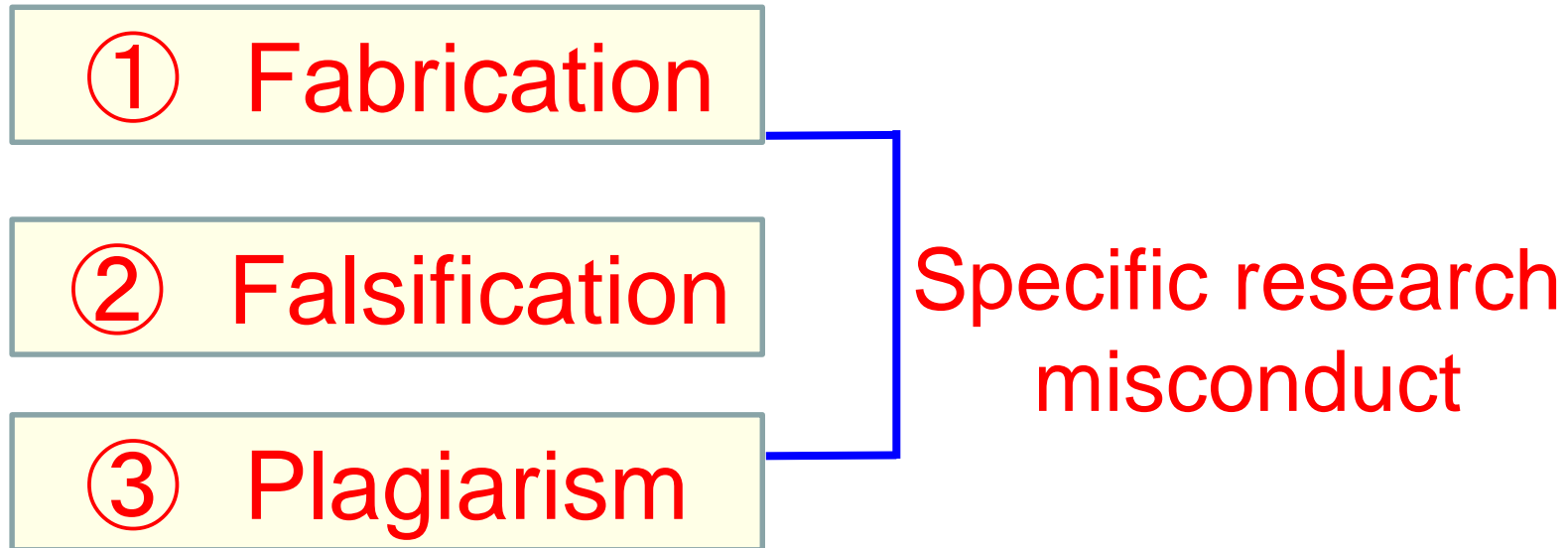
What is Misconduct in Research Activities?

Behaviors that violate research **ethics**, distort the **nature** of research or findings of research **when presented to the public**, and **disturb good communication** among researchers.

1. Responsible Conduct of Research

19

1. 2. Misconduct in Research Activities



1. Responsible Conduct of Research

1. 2. Misconduct in Research Activities

Specific research misconduct

① Fabrication

- Making up data or research results, etc.

② Falsification

- Manipulating research materials, equipment, or processes to change data or results obtained from research activities.

③ Plagiarism

- Appropriating the ideas, analyses, analytical methods, data, research results, research paper(s), or words of other researchers without obtaining the permission of the researchers or giving appropriate credit.

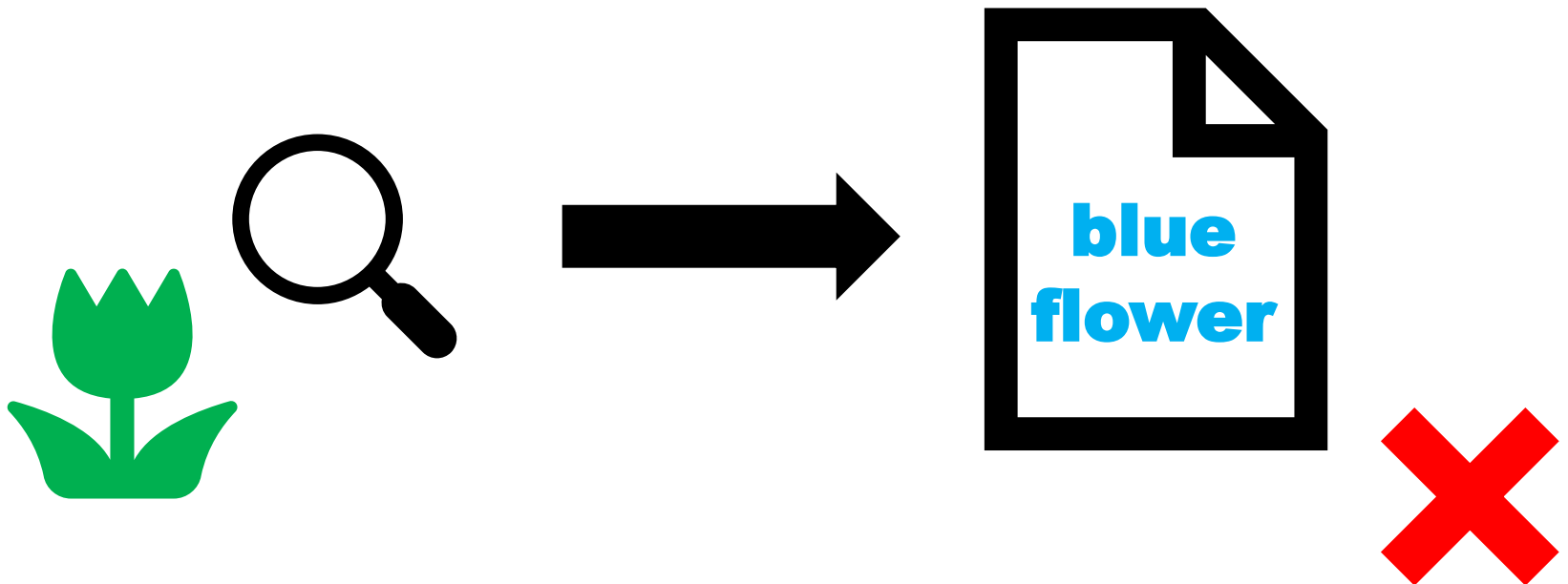
1. Responsible Conduct of Research

1. 2. Misconduct in Research Activities

Specific research misconduct

① Fabrication

- Making up data or research results, etc.



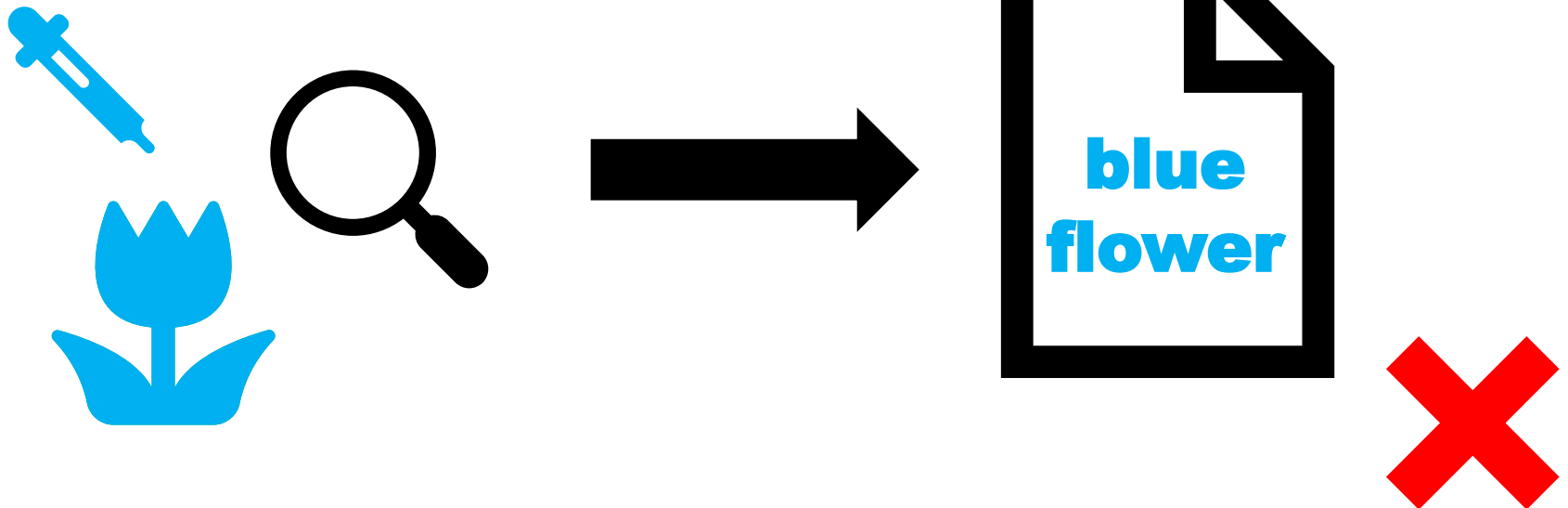
1. Responsible Conduct of Research

1. 2. Misconduct in Research Activities

Specific research misconduct

② Falsification

- Manipulating research materials, equipment, or processes to change data or results obtained from research activities.



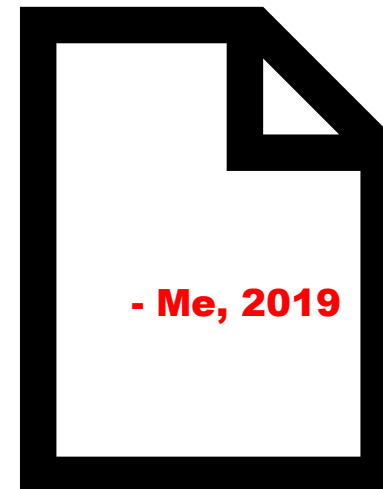
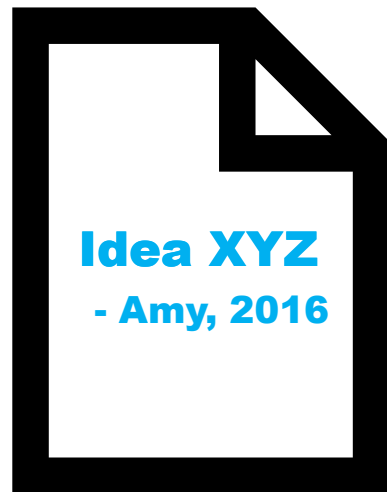
1. Responsible Conduct of Research

1. 2. Misconduct in Research Activities

Specific research misconduct

③ Plagiarism

- Appropriating the ideas, analyses, analytical methods, data, research results, research paper(s), or words of other researchers without obtaining the permission of the researchers or giving appropriate credit.





1. Responsible Conduct of Research

1. 2. Misconduct in Research Activities

Table 9 : Distribution by majors

Major	Fabrication	Falsification (Manipulation)	Plagiarism (Piracy)	Others	Total [aggregate]
Medicine (Medicine, dentistry and pharmacology)	15	7	6	7	30 [35]
Science and engineering	8	3	7	2	18 [20]
Humanities and Social Sciences	2	—	36	1	39 [39]
Education	1	1	5	—	6 [7]
Agriculture	1	—	—	—	1 [1]
Others (Including three unidentified cases)	—	—	4	—	4 [4]
Total	27	11	58	10	98 [106]
Biology and Biotechnology	21	7	6	7	36 [41]

Numbers are based on newspaper and other materials that the author has
(Since Oct.1997)

In the past, Hiroshima University experienced cases such as data manipulation and plagiarism, which damaged trust of both society and the research field.

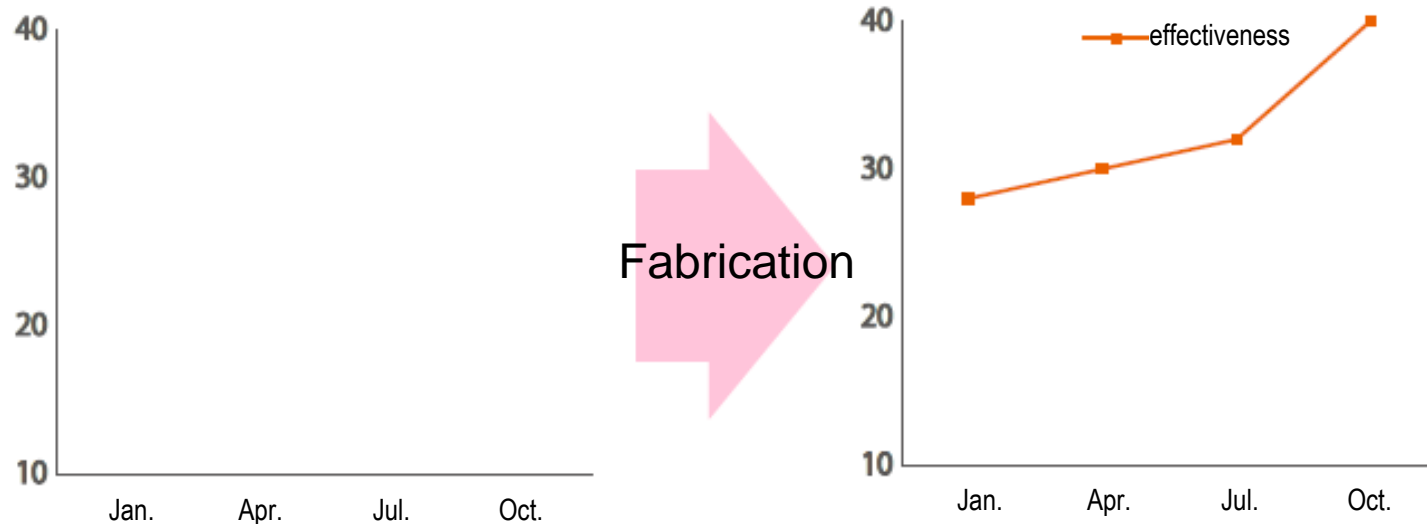
Note : There are no clear differences in the definitions of plagiarism and piracy

Reference : Kikuchi, Shigeaki.,IL SAGGIATORE, 40, 63-86 (2013)

1. Responsible Conduct of Research

1. 2. Misconduct in Research Activities

① Fabrication



An example of fabrication could be that a researcher made up data without conducting any actual experiments. Perhaps, he/she simply assumed that the effectiveness would increase over time or took from someone else's research which had confirmed the constant increase of effectiveness.

1. Responsible Conduct of Research

1. 2. Misconduct in Research Activities

② Example of Falsification

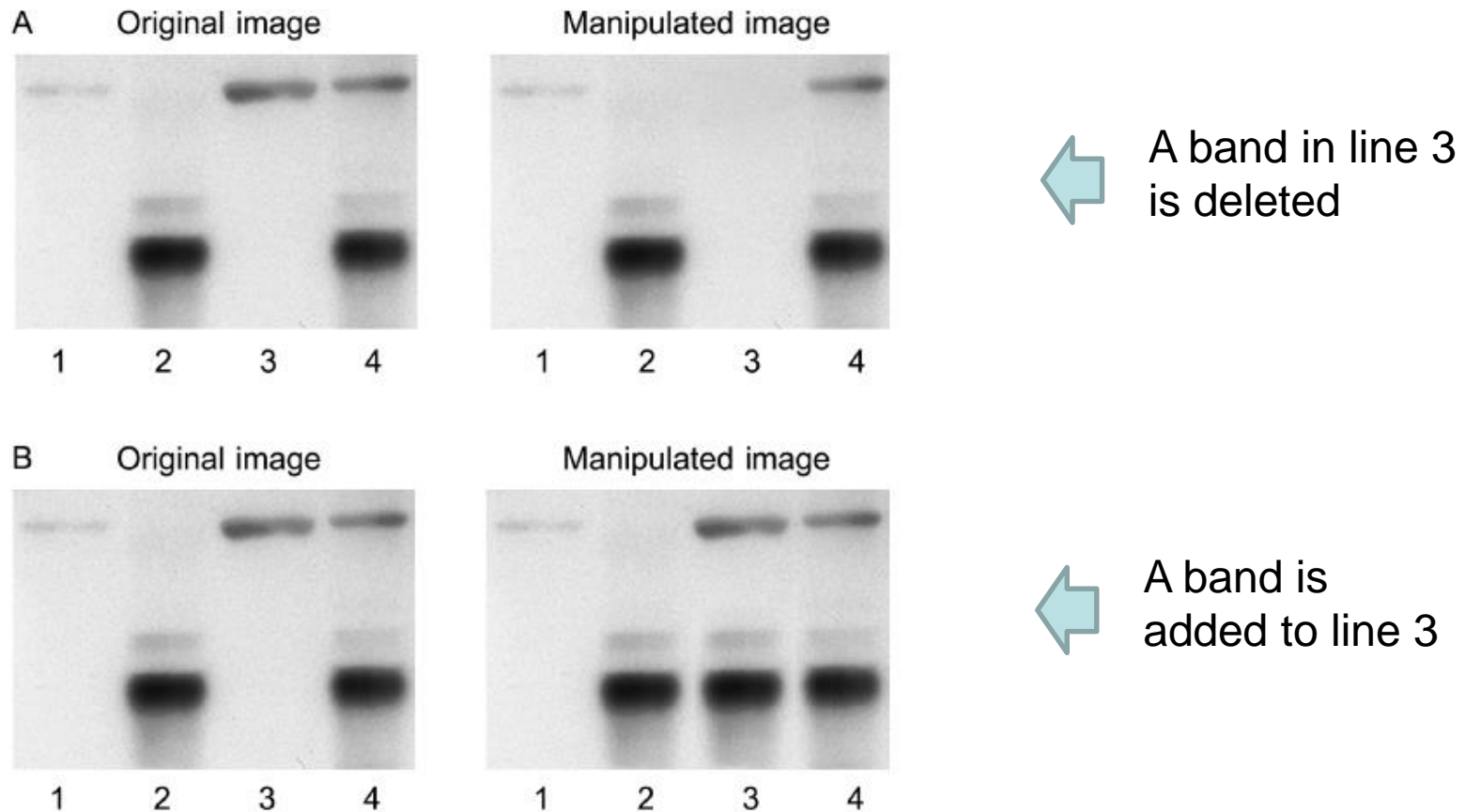
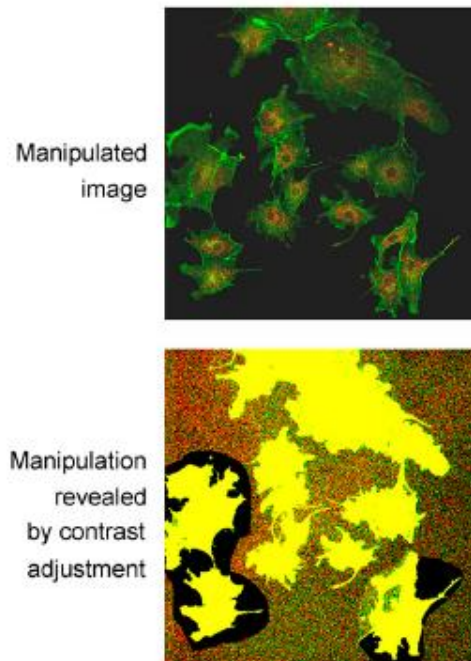


Figure 1. **Gross manipulation of blots.** (A) Example of a band deleted from the original data (lane 3). (B) Example of a band added to the original data (lane 3).

1. Responsible Conduct of Research

1. 2. Misconduct in Research Activities

② Example of Falsification



Two cells in the left and one in the right bottom were added after the fact.

Figure 6. **Misrepresentation of image data.** Cells from various fields have been juxtaposed in a single image, giving the impression that they were present in the same microscope field. A manipulated panel is shown at the top. The same panel, with the contrast adjusted by us to reveal the manipulation, is shown at the bottom.



1. Responsible Conduct of Research

1. 2. Misconduct in Research Activities

③ Plagiarism

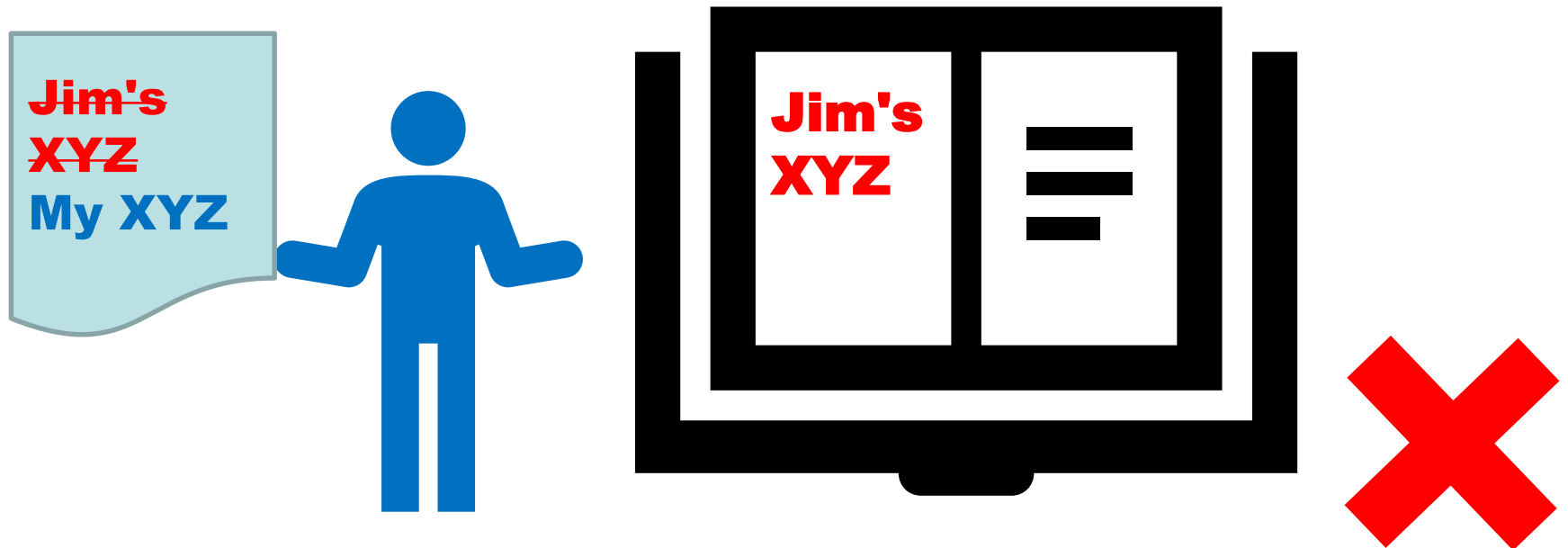
- Using large parts of someone else's paper, **without properly citing** it, as if writing them **as one's own work** is obvious plagiarism.
- A university professor looking at an unpublished paper of his graduate student and **publishing an idea found in the preprint as his own idea** is also considered plagiarism.
- **In the humanities and social sciences**, while research misconduct involving fabrication and falsification has not been so common, **it is becoming a significant problem.**

1. Responsible Conduct of Research

1. 2. Misconduct in Research Activities

③ Plagiarism

- Using large parts of someone else's paper, **without properly citing** it, as if writing them **as one's own work** is obvious plagiarism.



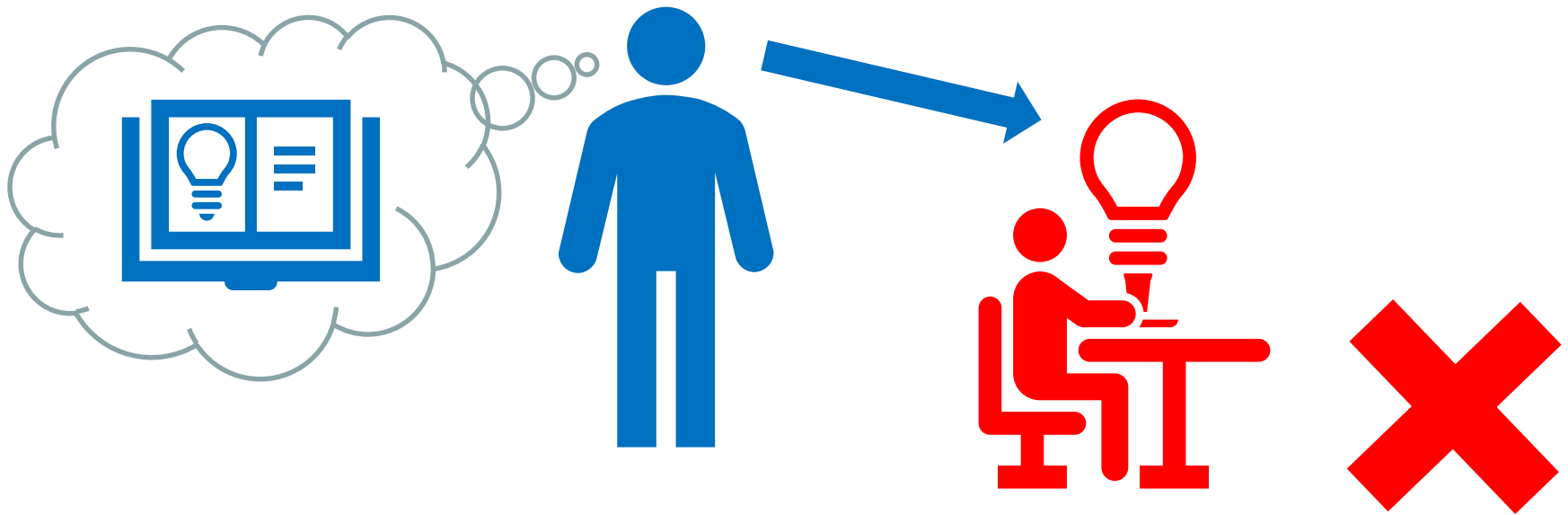
(Green Book Text P37)

1. Responsible Conduct of Research

1. 2. Misconduct in Research Activities

③ Plagiarism

- A university professor looking at an unpublished paper of his graduate student and **publishing an idea found in the preprint as his own idea** is also considered plagiarism.



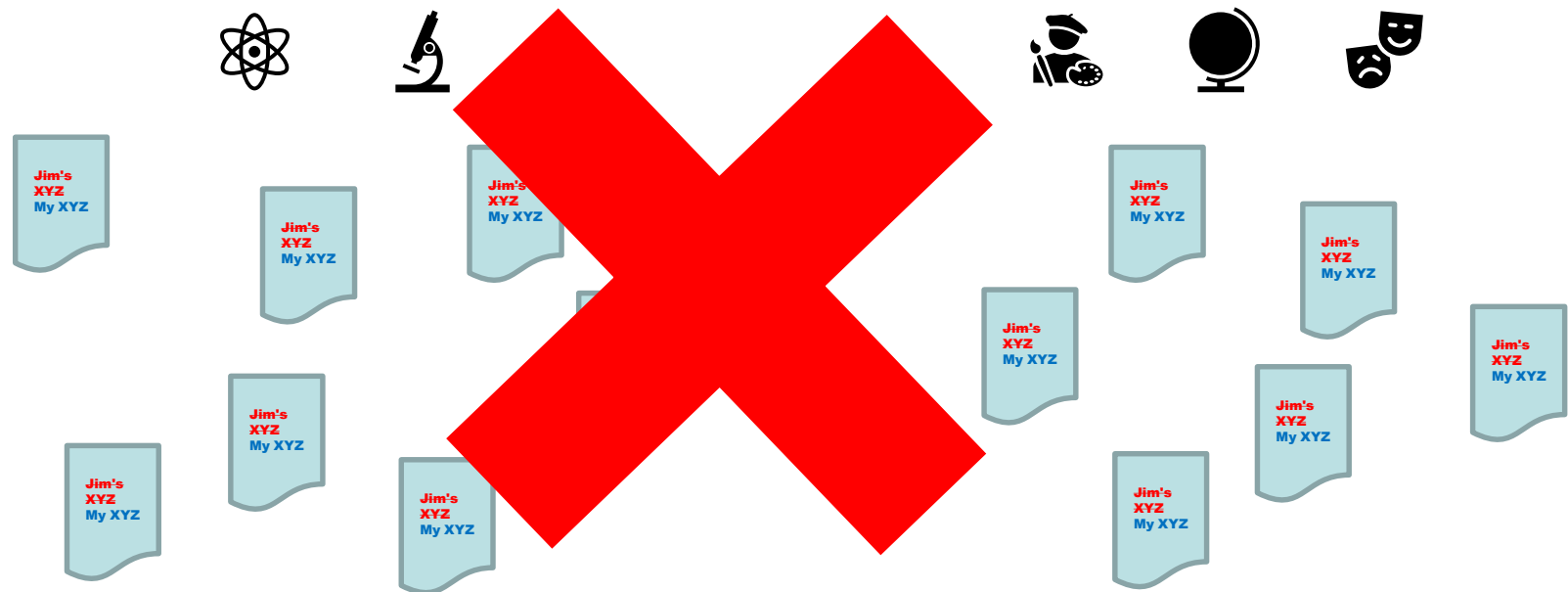
(Green Book Text P37)

1. Responsible Conduct of Research

1. 2. Misconduct in Research Activities

③ Plagiarism

- In the humanities and social sciences, while research misconduct involving fabrication and falsification has not been so common, it is becoming a significant problem.



(Green Book Text P37)

1. Responsible Conduct of Research

1. 2. Misconduct in Research Activities

③ Plagiarism

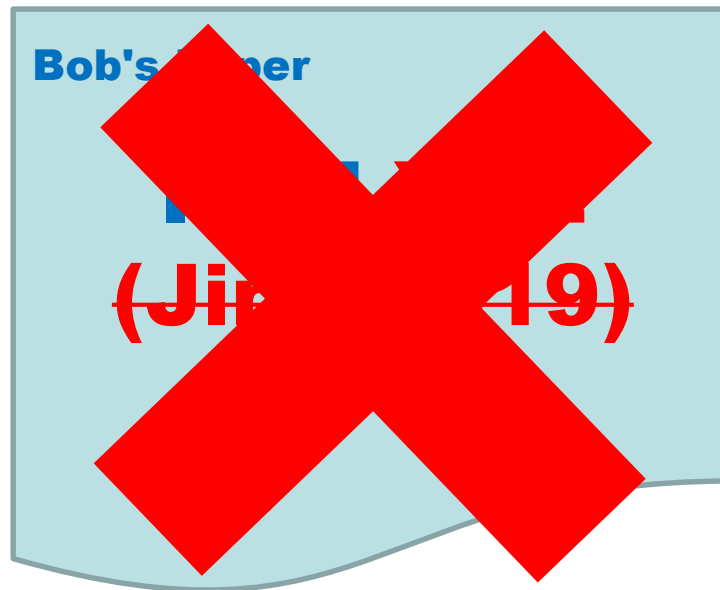
- In experimental research, a different type of problem exists: **not citing sources of published papers** when documenting materials and methods used in **one's own experiments**.
- Furthermore, **original sources should be cited** not only when using someone else's original description but also **when adding changes and modifications to original descriptions**.

1. Responsible Conduct of Research

1. 2. Misconduct in Research Activities

③ Plagiarism

- In experimental research, a different type of problem exists: **not citing sources of published papers** when documenting materials and methods used in **one's own experiments**.



(Green Book Text P37)

1. Responsible Conduct of Research

1. 2. Misconduct in Research Activities

③ Plagiarism

- Furthermore, **original sources should be cited** not only when using someone else's original description but also **when adding changes and modifications to original descriptions**.

Bob's Paper

**I did XYZ
(Jim, 2019)
+ my ABC**



(Green Book Text P37)

1. Responsible Conduct of Research

1. 2. Misconduct in Research Activities

③ Examples of Plagiarism (in the humanities)

- Professor A (Department of English and Contemporary Society: An academic paper posted in the 8th issue of the department journal (March 2013) was found to be plagiarized from an academic paper written by professor Z. (16 pages out of 35 pages, including from the 14th to 54th notes out of a total of 54 notes listed in the end.)
- Associate professor B (Faculty of Commerce): The professor used sentences, graphs and charts from **three master's theses(2013-14) without permission**, as well as failing to cite sources. The professor posted two articles in 日本経営学会誌 (*Journal of Japan Academy of Business Administration*) and two more articles in *Waseda Bulletin of International Management*.



1. Responsible Conduct of Research

1. 2. Misconduct in Research Activities

③ Examples of Plagiarism (in the humanities)

- University student C: **Student's undergraduate thesis** (2012) appeared in *Annual Reports of the Cultural Documents Research Institute* but was found to have **plagiarized nearly 20 parts** from works by a professor of Ochanomizu University and others.
- Graduate student D (Graduate School of Public Management): **At least 64 parts in student's doctoral thesis were cited inappropriately** and 12 parts among 64, which the student claimed as his observation, were verified as plagiarism. The student's degree was revoked. (2013)

1. Responsible Conduct of Research

1. 2. Misconduct in Research Activities

③ Plagiarism

Major Academic Papers Conduct

Investigation on Plagiarism

- iThenticate (Plagiarism detector)
 - Participants: More than 500 publishers including Elsevier, Nature Publishing, Springer, Taylor & Francis, etc.
 - Database: Nearly 80,000 scientific, technological and medical journals
- Six-month test was conducted in three magazines of Taylor & Francis
Approximately 10%, 6%, 23% of articles were rejected because of plagiarism (Nature 466, 167 (2010))

1. Responsible Conduct of Research

1. 2. Misconduct in Research Activities

③ Plagiarism

Plagiarism Detection Software

(iThenticate)

The screenshot displays the iThenticate interface. At the top, it shows the document title 'Spatial and temporal distribution of Secchi depth in Suo' by Wataru Nishijima, with a similarity score of 11%. The 'Match Overview' table lists 10 matches:

Match	Source	Words	Similarity
1	CrossCheck	83 words	2%
2	CrossCheck	42 words	1%
3	Internet	36 words	1%
4	CrossCheck	35 words	1%
5	Internet	29 words	1%
6	CrossCheck	28 words	1%
7	CrossCheck	27 words	1%
8	CrossCheck	19 words	<1%
9	CrossCheck	19 words	<1%
10	CrossCheck	17 words	<1%

The main text area shows a snippet of the document with a highlighted section. A tooltip for the first match (CrossCheck 83 words) is visible, showing the source: 'Tetsuo Yanagi, "Open Ocean Originated Phosphorus and Nitrogen in the Seto Inland Sea, Japan", Journal of Oceanography, 2008'.

- Students cannot use by themselves, but faculty members have access to this software at our university.
- Recently, it has become easier to detect plagiarism.



1. Responsible Conduct of Research

1. 2. Misconduct in Research Activities

(3) Plagiarism

Plagiarism Detection Software (iThenticate)

For doctoral and master's dissertations, confirmation by iThenticate is required (applicable as of March 2022)

	Before submission (First time)	At the time of examination (Second time)	Remarks
For doctoral dissertation	Indispensable Attachment of 「Doctoral Dissertation Plagiarism Checking Confirmation」 (The signature of your academic advisor is required.)	Indispensable Attachment of 「Doctoral Dissertation Plagiarism Checking Confirmation」 (The examiner's signature is required.)	Two-time confirmation
For master's thesis	Indispensable Attachment of 「Master's Thesis Submission Confirmation」 (The signature of your academic advisor is required.)	/	One-time confirmation
(For graduation thesis)	(Recommended)	/	/

• “Doctoral Dissertation Plagiarism Checking Confirmation”

• “Master’s Thesis Submission Confirmation”

(Confirm that iThenticate was used and that citations were used as appropriate)

1. Responsible Conduct of Research

1. 2. Misconduct in Research Activities

- Things you should never do with Photoshop:
 - ① Copy & paste (needless to say)
←however, most of fabrication in the past was this
 - ② Touch-up (a tool to edit and clean up images) using
 - ③ Retouching part of images such as changing lightning or contrast
 - ④ Manipulating the research results to look as if those are obtained from one datum, while actually the results are obtained at a different times or from different locations (for instance, if two separate gel electrophoresis lanes are brought closer to each other, a boundary line should be drawn)

1. Responsible Conduct of Research

41

1. 2. Misconduct in Research Activities

① Fabrication

② Falsification

③ Plagiarism

④ Duplicate posting

⑤ Inappropriate writing of authors
of academic papers

⑥ Not properly citing existing papers

Specific research
misconduct

1. Responsible Conduct of Research

Behaviors that are not permitted for researchers

1. 2. Misconduct in Research Activities

1. 3. Inappropriate Use of Research Funds

1. Responsible Conduct of Research 43

1. 3.

Improper Use of Research Funds

For the Sound Development of Science -The Attitude of a Conscientious Scientist- **Section VI Appropriate Use of Research Funds**



1. Responsible Conduct of Research

1. 3. Improper Use of Research Funds

Research expense is a fund to be used for activities at Hiroshima University, including education and research. It's a precious financial source provided by Japanese people and companies etc.

➔ **You always have to keep in mind that research expenses etc. are not "your own money" but "money provided by people in Japan etc."**

When you incur the research expense etc., following behaviors are considered to be inappropriate use of research expense.

① Misappropriation

② False charging

③ Personal accounting

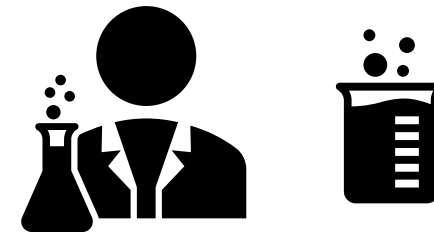
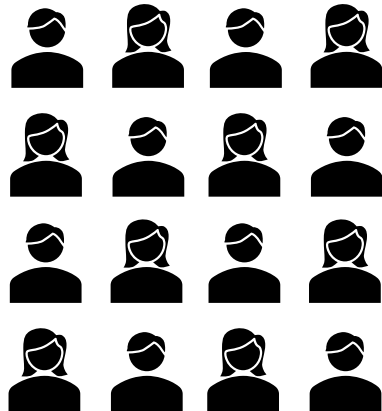
➔ **In recent years, many cases of inappropriate use of research expenses have been identified through investigations performed by "the Board of Audit of Japan" and "Taxation Bureau" etc.**

1. Responsible Conduct of Research

1. 3. Improper Use of Research Funds

Research expense is a fund to be used for activities at Hiroshima University, including education and research. It's a precious financial source provided by Japanese people and companies etc.

➡ You always have to keep in mind that research expenses etc. are not "your own money" but "money provided by people in Japan etc."





1. Responsible Conduct of Research

1. 3. Improper Use of Research Funds

When you incur the research expense etc., following behaviors are considered to be inappropriate use of research expense.

① Misappropriation

② False charging

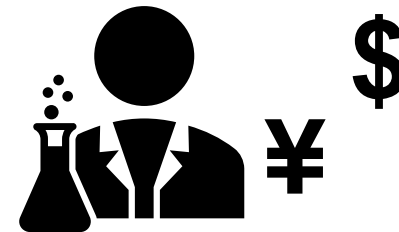
③ Personal accounting



1. Responsible Conduct of Research

1. 3. Improper Use of Research Funds

→ In recent years, many cases of inappropriate use of research expenses have been identified through investigations performed by “the Board of Audit of Japan” and “Taxation Bureau” etc.





1. Responsible Conduct of Research

1. 3. Improper Use of Research Funds

① Example of Misappropriation

[Use for other than the intended purpose/embezzlement]

Accounting processes that faculty members should normally perform, such as ordering, receipt confirmation, and budget control, were left to one part-time staff member. Between 2004 and 2011, this part-time staff member, despite not having the authority to place orders, used unauthorized procedures to purchase large amounts of items such as personal computers, without receiving permission from faculty members. The staff member then sold these on to resellers and embezzled the proceeds.

[National University A]

- ➡ **In order to prevent resale, Hiroshima University stamps a receipt seal on goods at delivery. In addition, we attach stickers printed with reference numbers on items after installation. We then conduct regular spot checks on items.**

1. Responsible Conduct of Research

1. 3. Improper Use of Research Funds

② Example of False charging

【 Deposit in vendor 】

Several teachers were found to get involved in the so-called “deposit” practice. Despite that there was no actual delivery of goods, they asked the vendor to prepare the false delivery slip/invoice. Then, the money (about 36 mil. yen), which had been paid by the university according to such false documents, was kept by the vendor so that they can manage it as they want. [Example of Hiroshima University]

From FY2004 to 2009, “deposit” and “intentionally change of purchase goods name recorded on the accounting book” practices were performed (by 31 faculty members/staff) for payment of about 190 mil.

In one of such cases, which was judged to be misappropriation, was malicious because the dummy goods were prepared on purpose to repeatedly change the name of purchase goods by using such goods. [National University A]

→ **Hiroshima University has adopted a receiving inspection system at the time of goods delivery to prevent inappropriate use of expense related to delivery of goods, including “deposit”.**

Your cooperation for receiving inspection work by person in charge at the goods delivery management center etc. would be appreciated.



1. Responsible Conduct of Research

1. 3. Improper Use of Research Funds

③ Example of Personal accounting

When a faculty member received a donation or subsidy for official education and research activities, he/she failed to go through the procedure to donate such money to the university, and handled it as personal accounting, resulting in payment of back tax. [Hiroshima University etc.]

➡ **When you receive the above type of money, don't make a decision on your own but inform a person in charge of finance at your faculty/graduate school, etc.**

1. Responsible Conduct of Research

1. 3. Improper Use of Research Funds

- ① Misappropriation ② False charging ③ Personal accounting

It was feigned that students had provided assistance in experiments, and students were then made to kick back the honoraria they received from the university. The faculty member then pooled the kickbacks in the research group and used it for payments to research subjects.

[Hiroshima University]

Knowing that another institution's expenses would cover travel costs, a claim was made for business trip-related travel expenses from both this university and the other institution, and duplicate travel expenses were received from the two institutions.

[Hiroshima University]

Money was wrongly pooled in the laboratory's bankbook through "a fake business trip" which made the university pay the trip expense without having the actual business trip, and a kickback paid by the part-time researchers from their salary. Part of such money was spent for private use.

[Example of National University C]

➔ **Hiroshima University implements efforts such as asking for submission of documents which objectively prove the fact of a trip and interviewing a person who receives honorarium when an internal audit is conducted.**

1. Responsible Conduct of Research

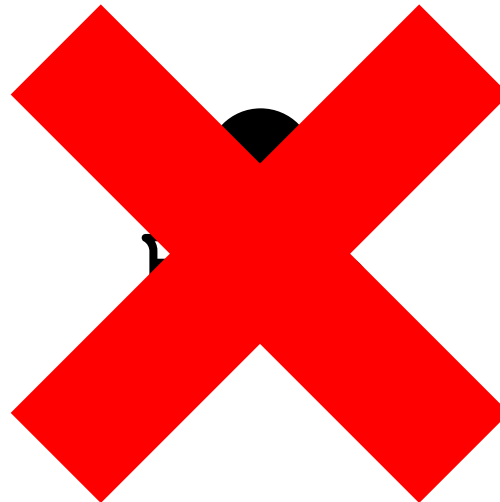
1. 3. Improper Use of Research Funds

① Misappropriation

It was feigned that students had provided assistance in experiments, and students were then made to kick back the honoraria they received from the university. The faculty member then pooled the kickbacks in the research group and used it for payments to research subjects.



Students



Faculty member

[Hiroshima University]



Research subjects

1. Responsible Conduct of Research

1. 3. Improper Use of Research Funds

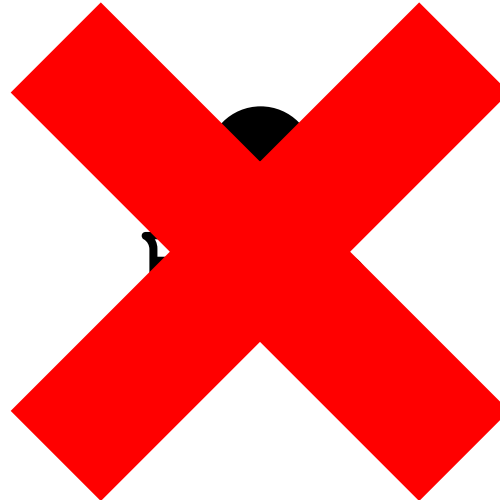
② False charging

Knowing that another institution's expenses would cover travel costs, a claim was made for business trip-related travel expenses from both this university and the other institution, and duplicate travel expenses were received from the two institutions.

[Hiroshima University]



Institution A



Institution B

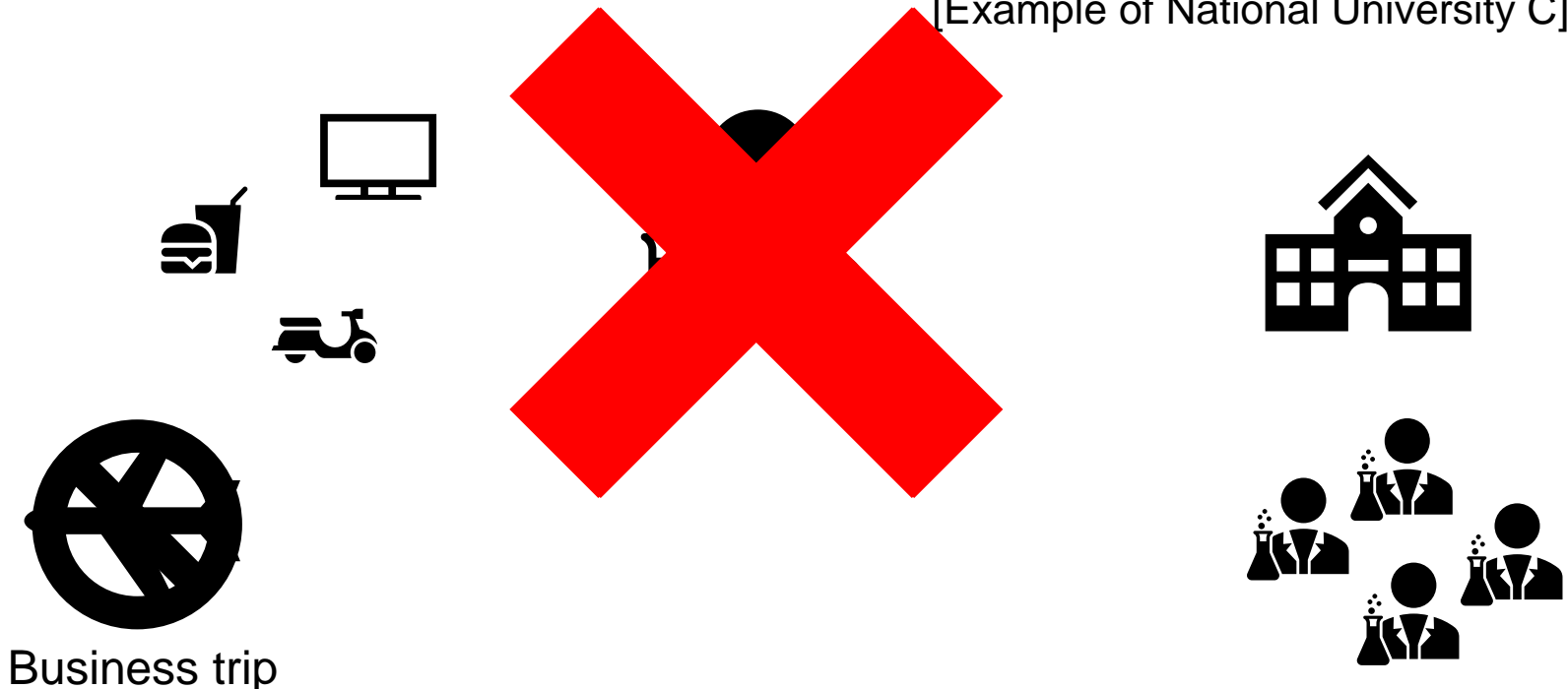
1. Responsible Conduct of Research

1. 3. Improper Use of Research Funds

③ Personal accounting

Money was wrongly pooled in the laboratory's bankbook through "a fake business trip" which made the university pay the trip expense without having the actual business trip, and a kickback paid by the part-time researchers from their salary. Part of such money was spent for private use.

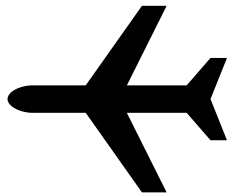
[Example of National University C]



1. Responsible Conduct of Research

1. 3. Improper Use of Research Funds

Hiroshima University implements efforts such as asking for submission of documents which objectively prove the fact of a trip and interviewing a person who receives honorarium when an internal audit is conducted.





1. Responsible Conduct of Research

1. 3. Improper Use of Research Funds

【Impact to a person】

- Criminal accusation (If it's recognized as misappropriation etc.)
- Disciplinary action (If it's recognized as misappropriation, punitive dismissal is included.)
- Restriction to application for competitive research funds (for 10 years if misappropriation is recognized.)
- Reimbursement of money which was inappropriately used. (If it cannot be paid back with the research expense etc., it could be repaid by private money.)

【Impact to the university and other researchers】

- Downgrading of operation performance evaluation rating by National University Corporation Evaluation Committee by one level
- Restriction to application for competitive research funds (for 2 years at maximum if it's recognized as violation of good manager's duty of care.)
- Suspension of grants to the whole university
- Reduction of indirect expenses

➡ **As inappropriate use of expense has a significant impact to both a person and the university etc., please be sure to confirm the accounting rule first, and go through the appropriate paperwork based on the fact.**

Contents

1. Responsible Conduct of Research (P.9~)
 - 1.1. What is a Responsible Research Activity? (P.10~)
 - 1.2. Misconduct in Research Activities (P.14~)
 - 1.3. Improper Use of Research Funds (P.42~)
 - 1.4. Data Handling (P.57~)
 - 1.5. Presenting Research Results (P.105~)
2. Norms and Rules of Scientists at Hiroshima University (P.141~)
3. Actual Case of Misconduct at Hiroshima University (P.149~)



1. Responsible Conduct of Research

1. 4.

Data Handling

For the Sound Development of Science -The Attitude of a Conscientious Scientist-

Section II Planning Research

Section III Conducting Research

2. Informed Consent

3. Protecting Personal Information

4. Collecting, Managing, and Processing Data



1. Responsible Conduct of Research

1. 4. Data Handling

Previous research

Process of Research

Research
planning

Research
planning

Research
conduct

Research
conduct

Presentation of research results

【Citation/credit】 Credit for previous research and clear distinction between one's research and others' should be made.

For further improvement of one's own study, storing the primary information that you obtained (raw data including the experiment conditions and advanced questionnaires) is essential.

In order to verify the research results, it is required to keep correct primary information.

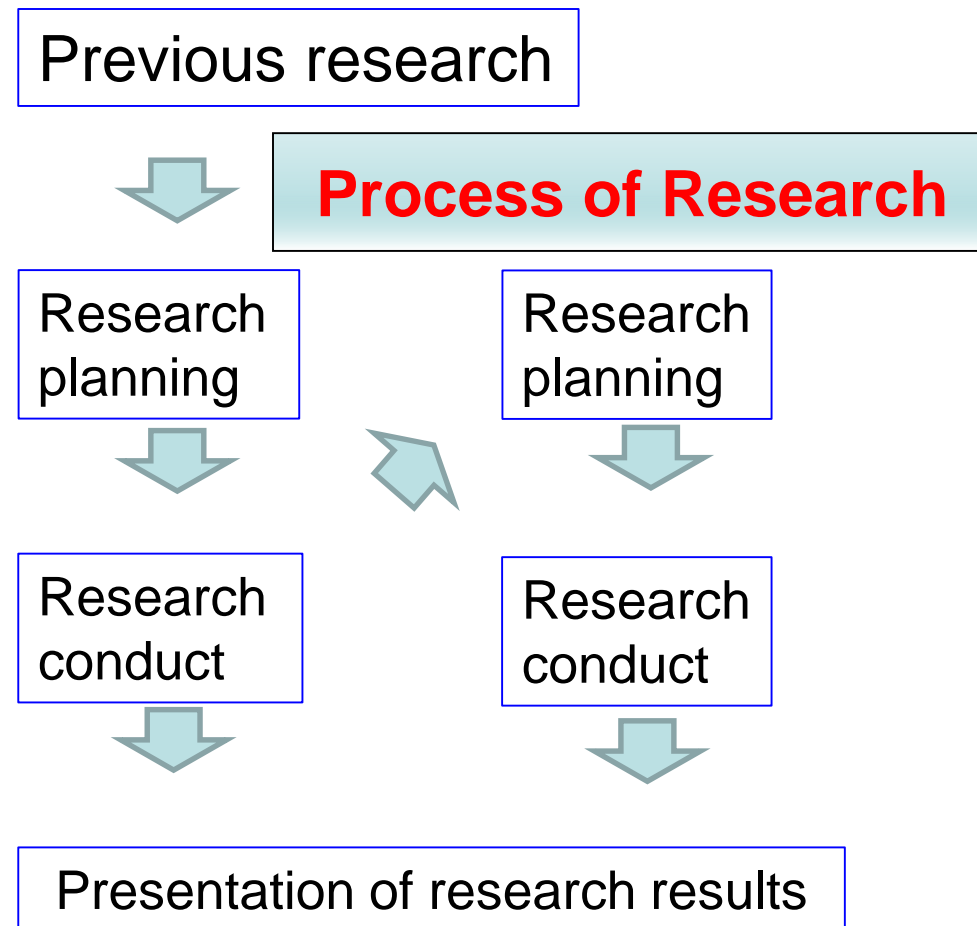
In order to ensure the reliability of published research results, it is required to keep not only the published contents but also the process that proves how the result was obtained from data.

Undergraduate theses • master theses • doctoral theses
Presentations at conferences • submitted papers



1. Responsible Conduct of Research

1. 4. Data Handling



Undergraduate theses • master theses • doctoral theses
Presentations at conferences • submitted papers



1. Responsible Conduct of Research

1. 4. Data Handling

- 【Citation/credit】 Credit for previous research and clear distinction between **one's research** and **others'** should be made.

My research will...

Tom's (2015) research did...

According to Mary (2017)...

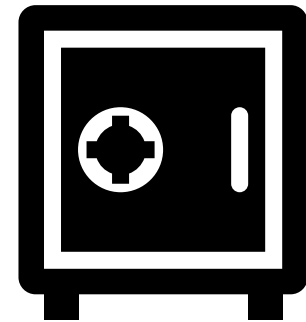
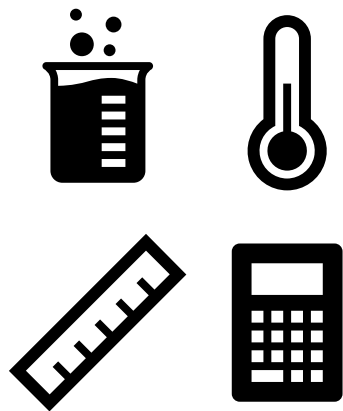
Keita (2012) demonstrated that...



1. Responsible Conduct of Research

1. 4. Data Handling

- For further improvement of one's own study, storing the primary information that you obtained (raw data including the experiment conditions and advanced questionnaires) is essential.
- In order to verify the research results, it is required to keep correct primary information.
- In order to ensure the reliability of published research results, it is required to keep not only the published contents but also the process that proves how the result was obtained from data.



1. Responsible Conduct of Research

1. 4. Data Handling

- Research data ensures the reliability of research results not only at the time of publication but also after publication (including master's theses.)
- If there are doubts about a paper, it is necessary to prove the correctness with research data.

[authors & referees](#) > [Policies](#) > Image integrity

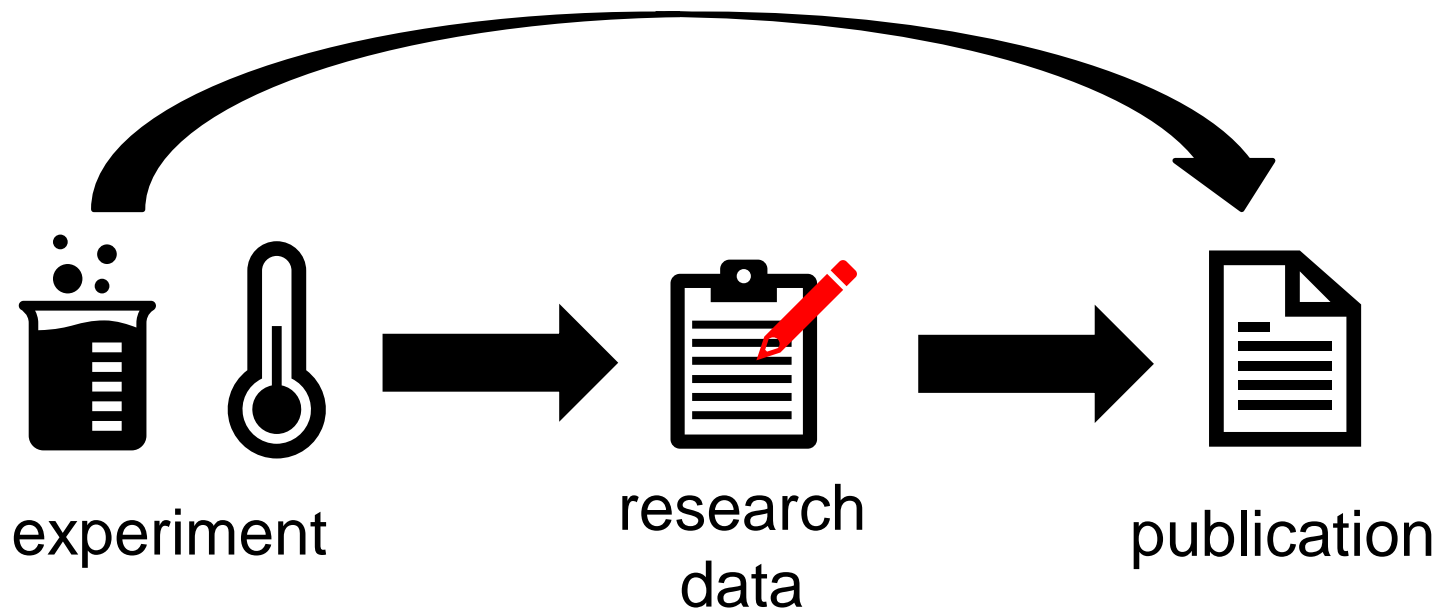
Image integrity and standards

Images submitted with a manuscript for review should be minimally processed (for instance, to add arrows to a micrograph). Authors should retain their unprocessed data and metadata files, as editors may request them to aid in manuscript evaluation. If unprocessed data are unavailable, manuscript evaluation may be stalled until the issue is resolved. All digitized images submitted with the final revision of the manuscript must be of high quality and have resolutions of at least 300 d.p.i. for colour, 600 d.p.i. for greyscale and 1,200 d.p.i. for line art.

1. Responsible Conduct of Research

1. 4. Data Handling

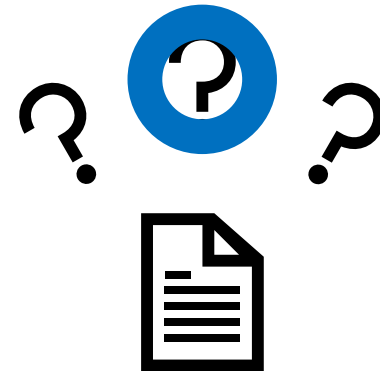
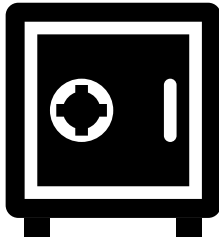
- Research data ensures the reliability of research results not only at the time of publication but also after publication (including master's theses.)



1. Responsible Conduct of Research

1. 4. Data Handling

- If there are doubts about a paper, it is necessary to prove the correctness with research data.



[authors & referees](#) > [Policies](#) > Image integrity

Image integrity and standards

Images submitted with a manuscript for review should be minimally processed (for instance, to add arrows to a micrograph). Authors should retain their unprocessed data and metadata files, as editors may request them to aid in manuscript evaluation. If unprocessed data are unavailable, manuscript evaluation may be stalled until the issue is resolved. All digitized images submitted with the final revision of the manuscript must be of high quality and have resolutions of at least 300 d.p.i. for colour, 600 d.p.i. for greyscale and 1,200 d.p.i. for line art.

1. Responsible Conduct of Research

1. 4. Data Handling

Reliability of Data

- ① Data are obtained based on appropriate methods.
- ② Data collection does not involve intentional wrong-doing or mistakes due to negligence.
- ③ Data obtained are properly stored and their originality is maintained.

1. Responsible Conduct of Research

1. 4. Data Handling in experimental research

Lab notes

- ① Storing unrevised **raw data**.
- ② Are the research results **replicated**?
The explanation of the details such as experiment material, process, conditions, experiment tools, measurement tools, etc.
- ③ Is the process which leads to the conclusion **explained**?
The detailed description of purpose, data processing, interpretation, development, etc.
- ④ **Originality** is maintained and shared.
Along with the clear notification of experiment date, researchers (contribution, intellectual property), sharing the information with supervisors and joint researchers

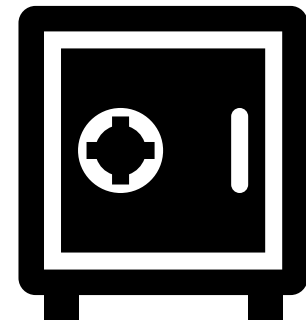
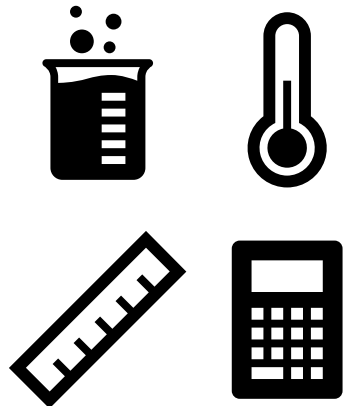
1. Responsible Conduct of Research

68

1. 4. Data Handling in experimental research

Lab notes

Storing unrevised **raw data**.



(Green Book Text P31)

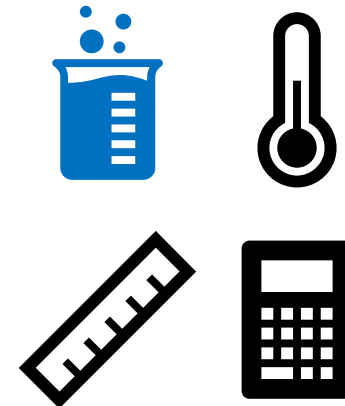
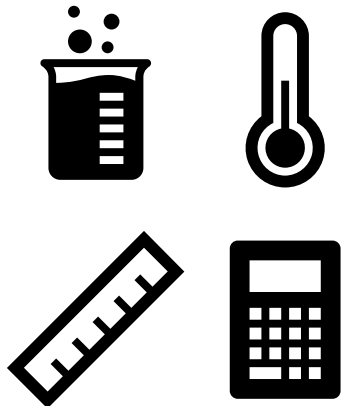
1. Responsible Conduct of Research

1. 4. Data Handling in experimental research

Lab notes

Are the research results **replicated** ?

The explanation of the details such as experiment material, process, conditions, experiment tools, measurement tools, etc.



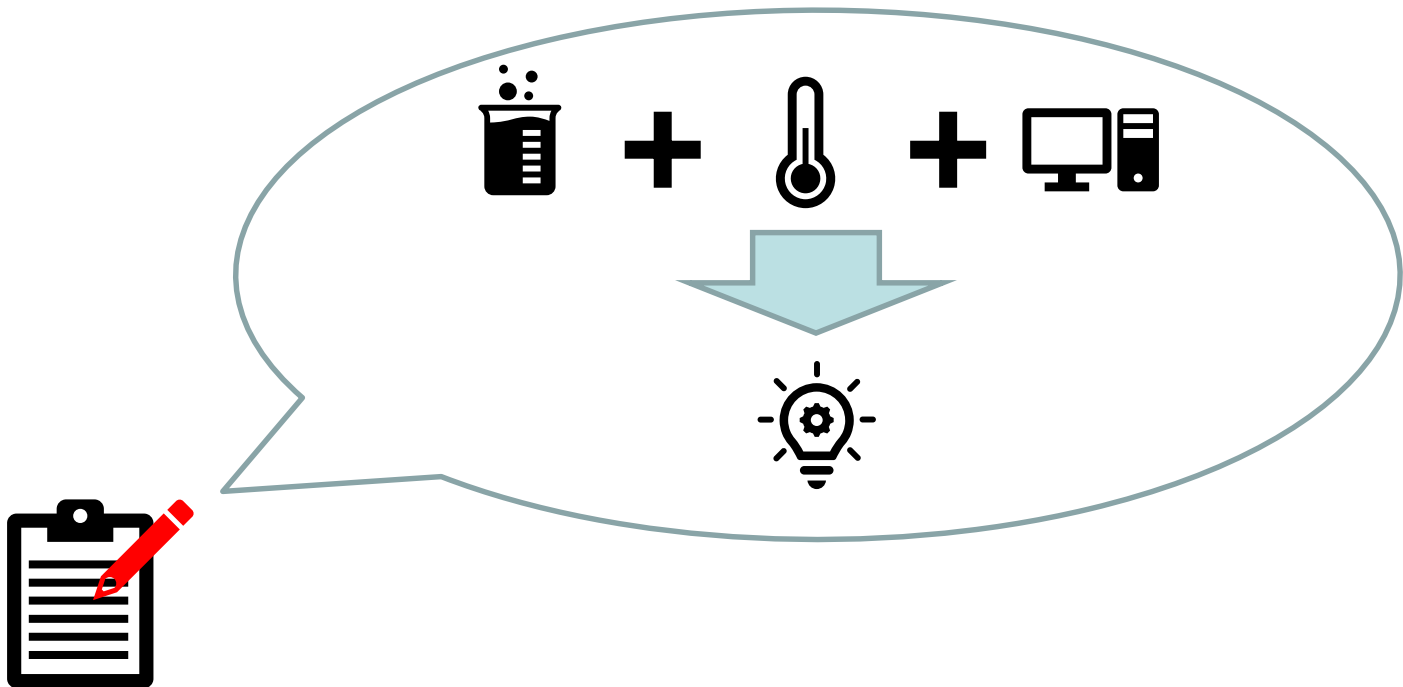
1. Responsible Conduct of Research

1. 4. Data Handling in experimental research

Lab notes

Is the process which leads to the conclusion **explained** ?

The detailed description of purpose, data processing, interpretation, development, etc.



1. Responsible Conduct of Research

1. 4. Data Handling in experimental research

Lab notes

Originality is maintained and shared.

Along with the clear notification of experiment date, researchers (contribution, intellectual property), sharing the information with supervisors and joint researchers



1. Responsible Conduct of Research

1. 4. Data Handling in experimental research

Managing Lab notes

- ① Lab notes do not belong to an individual; they belong to **the institution**.

Lab notes should be maintained on a group basis such as a research group.

As a general rule, Hiroshima University has a responsibility to maintain lab notes for 10 years after the academic paper was published.

- ② Data containing **personal information**.

Close attention should be given in order to avoid personal information leakage by taking measures such as setting access authorization, etc.

- ③ Storing data on electronic media.

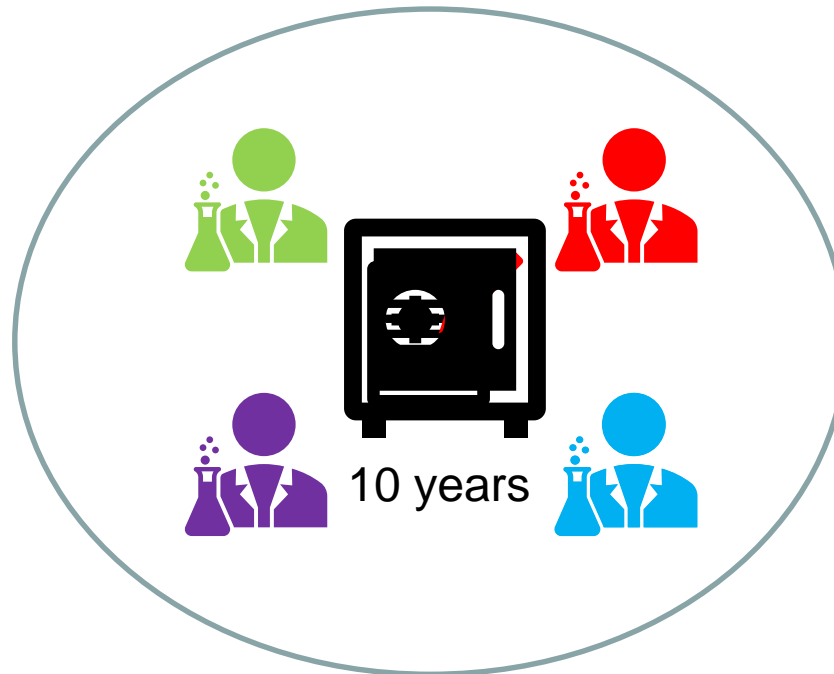
Storing in ways where **correction or editing are easily made should be avoided**.

1. Responsible Conduct of Research

1. 4. Data Handling in experimental research

Managing Lab notes

Lab notes do not belong to an individual; they belong to **the institution**.
 Lab notes should be maintained on a group basis such as a research group.
 As a general rule, Hiroshima University has a responsibility to maintain lab notes for 10 years after the academic paper was published.



1. Responsible Conduct of Research

1. 4. Data Handling in experimental research

Managing Lab notes

Data containing **personal information**.

Close attention should be given in order to avoid personal information leakage by taking measures such as setting access authorization, etc.



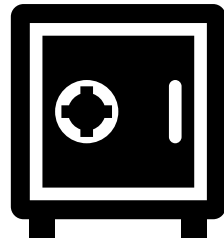
1. Responsible Conduct of Research

1. 4. Data Handling in experimental research

Managing Lab notes

Storing data on electronic media.

Storing in ways where **correction or editing are easily made should be avoided.**





1. Responsible Conduct of Research

1. 4. Data Handling in experimental research

Example of a lab note (Green Book Text P33)

[Entry Example]

Date, month, and year of the entry should be clearly recorded.

Only when the entry goes on for two or more pages.

Correction of an error (be sure the date is clear)

Page number, to be recorded when the page is used.

Full name of the reviewer

Date of review

Main title: research project title

Reference work cited

Later revision

Tally impression

Transparent film tape

Separate sheet attached

Only if a blank space is left below before going on to the next page

以下空白

記入者 鈴木次郎 確認者 佐藤太郎 日付 2010年 2月 9日

Signature of the person writing the entry (full name) Signature of the reviewer (full name) Date reviewed



Example of "Research Lab Notebook" developed jointly by Prof. Yoichiro Sada of Yamaguchi University and Kokuyo S & T Co. Ltd.,



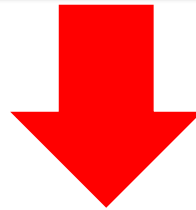
1. Responsible Conduct of Research

1. 4. Data Handling

Guidelines for storage of research material, etc. at Hiroshima University

Responsibilities of researchers, etc. [Regulation Paragraph3 Article 4]

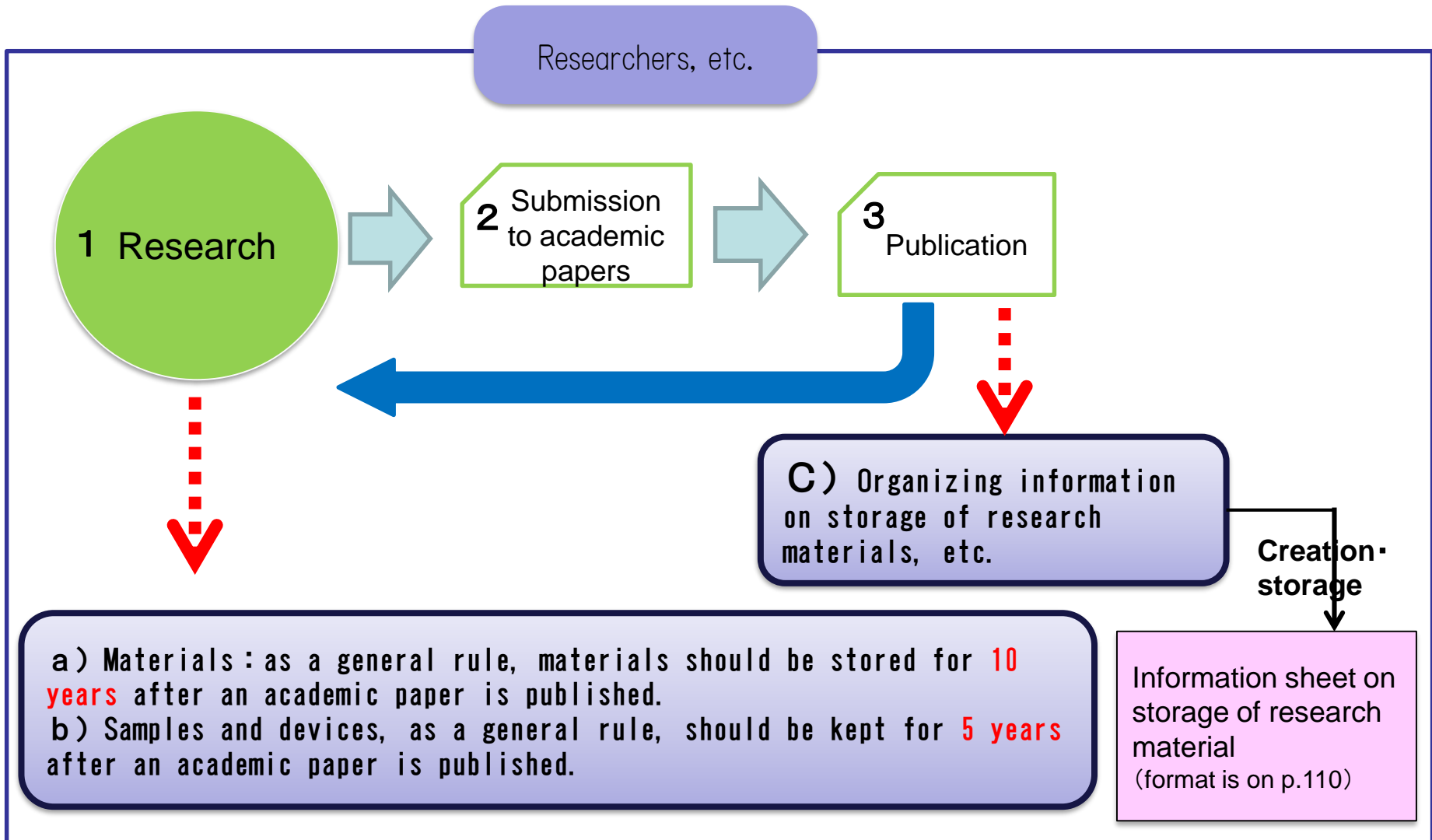
- Securing ways to verify legitimacy of research.
- Making it possible for a third party to verify the research.



『Guidelines for storage of research material, etc. at Hiroshima University』 was constituted.

1. Responsible Conduct of Research

1. 4. Data Handling



1. Responsible Conduct of Research

1. 4. Data Handling

Protection of Human Rights and Compliance with Laws and Regulations

- It is not correct to say that anything should be allowed in the name of scientific research.
- One should never forget that freedom in research is to be guaranteed only so far as the research fulfills its responsibility of protecting those things that are to be protected.

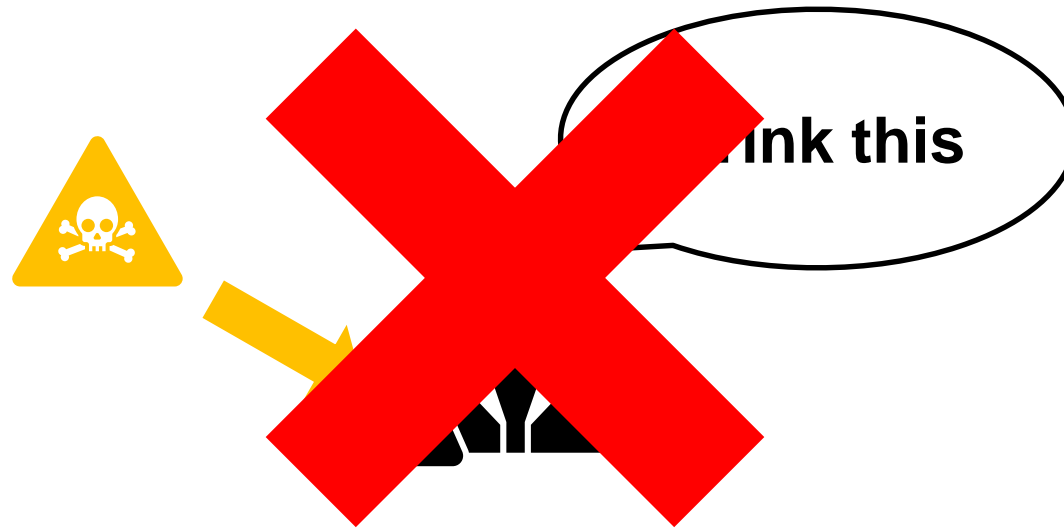
1. Responsible Conduct of Research

80

1. 4. Data Handling

Protection of Human Rights and Compliance with Laws and Regulations

- It is not correct to say that anything should be allowed in the name of scientific research.



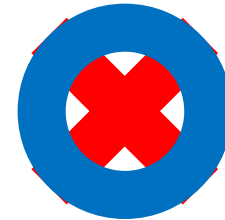
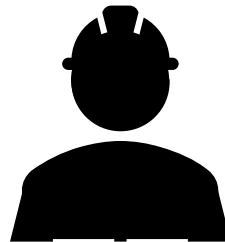
(Green Book Text P10)

1. Responsible Conduct of Research

1. 4. Data Handling

Protection of Human Rights and Compliance with Laws and Regulations

- One should never forget that freedom in research is to be guaranteed only so far as the research fulfills its responsibility of protecting those things that are to be protected.



1. Responsible Conduct of Research

1. 4. Data Handling

Protection of Human Rights and Compliance with Laws and Regulations

Compliance with Laws and Regulations

Compliance with laws and regulations
related to human life ethics

Compliance with laws and regulations related to safety

Approval of an ethics review committee

1. Responsible Conduct of Research

1. 4. Data Handling

Protection of Human Rights and Compliance with Laws and Regulations

Protection of human rights

Informed consent

Confidentiality of personal information

1. Responsible Conduct of Research

1. 4. Data Handling

Important points of Research involving Human Subjects

Informed consent

- means the consent that a person who is a candidate for inclusion as a subject of a clinical study, after having been fully informed of the design of the study by researchers or equivalent persons and having fully understood the significance, objective(s), method(s), etc. of the study, gives at his/her own discretion consent to participate in the study and approval of the procedures for handling the human specimens and equivalent materials.”

(Ethical Guidelines for Clinical Studies established by the Ministry of Health, Labor and Welfare)

1. Responsible Conduct of Research

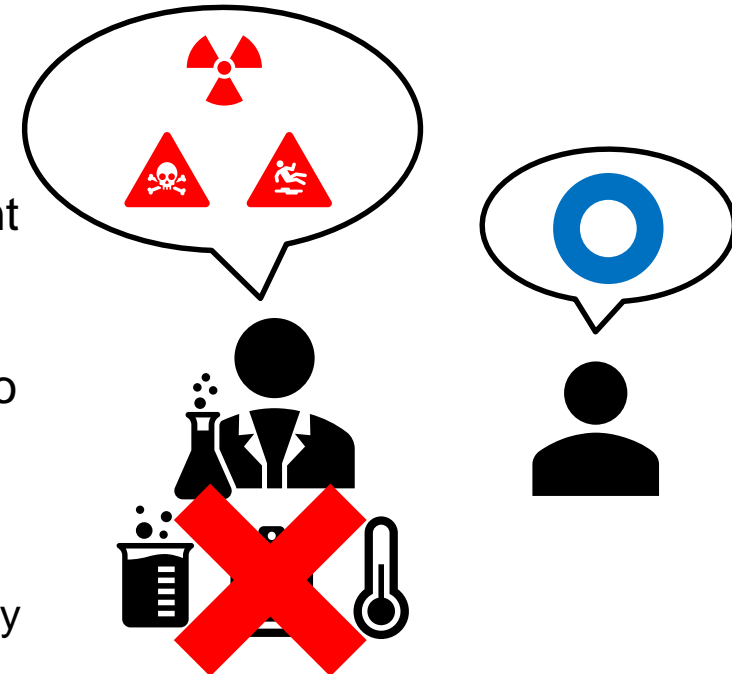
1. 4. Data Handling

Important points of Research involving Human Subjects

Informed consent

- means the consent that a person who is a candidate for inclusion as a subject of a clinical study, after having been fully informed of the design of the study by researchers or equivalent persons and having fully understood the significance, objective(s), method(s), etc. of the study, gives at his/her own discretion consent to participate in the study and approval of the procedures for handling the human specimens and equivalent materials.”

(Ethical Guidelines for Clinical Studies established by the Ministry of Health, Labor and Welfare)



(Green Book Text P22)

1. Responsible Conduct of Research

1. 4. Data Handling

Important points of Research involving Human Subjects

Informed consent

- **Protection of personal information**

(The same sort of consideration should be given in interviews and other research in the humanities and social sciences

procedures for handling the human specimens and equivalent materials."

(Ethical Guidelines for Clinical Studies established by the Ministry of Health, Labor and Welfare)

1. Responsible Conduct of Research

1. 4. Data Handling

Important points of Research involving Human Subjects

Protection of personal information

The same sort of consideration should be given in interviews and other research in the humanities and social sciences



(Green Book Text P22)

1. Responsible Conduct of Research

1. 4. Data Handling

Personal information

- “personal information” is defined as “information on a living individual, which can identify the specific individual by name, date of birth or other description contained in such information (including information that can be compared with other information and thereby identify the specific individual.)”

(Act on the Protection of Personal Information)

1. Responsible Conduct of Research

1. 4. Data Handling

Personal information

- Specifically, this includes not just information such as name, gender, date of birth, and other descriptions that can identify the specific individual but also “any information expressing facts, judgment, or evaluation concerning the individual’s physical body, assets, occupation, position, or other attributes.”

(It is expected that personal information such as base sequence, which comprises of DNA, is stipulated in a cabinet order.)

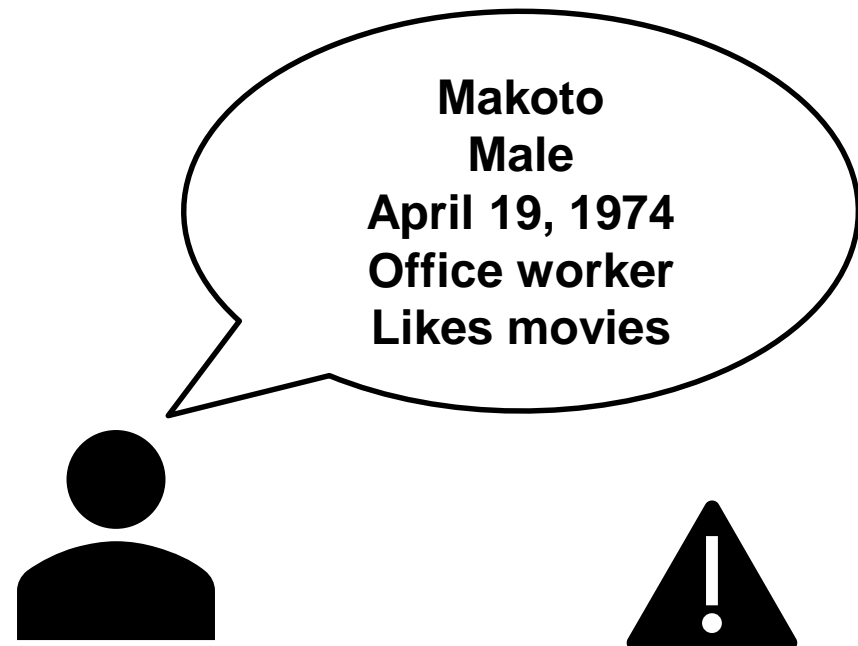
1. Responsible Conduct of Research

1. 4. Data Handling

Personal information

- Specifically, this includes not just information such as name, gender, date of birth, and other descriptions that can identify the specific individual but also “any information expressing facts, judgment, or evaluation concerning the individual’s physical body, assets, occupation, position, or other attributes.”

(It is expected that personal information such as base sequence, which comprises of DNA, is stipulated in a cabinet order.)



1. Responsible Conduct of Research

1. 4. Data Handling

Scientists' Responsibility for Personal Information

Ethical Guidance for Medical and Health Research Involving Human Subjects
(including information about the deceased that can identify a specific individual)

- ① Personal information shall not be obtained using an improper methods.
- ② Personal information shall not be used beyond the scope necessary to accomplish the purpose of its use specifically explained to the subject when obtaining informed consent.
- ③ Safety management shall be implemented to ensure that personal information is not leaked, lost, or damaged.
In addition, handling of anonymized data, etc.

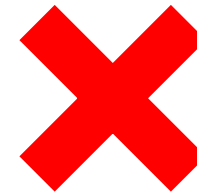
1. Responsible Conduct of Research

1. 4. Data Handling

Scientists' Responsibility for Personal Information

Ethical Guidance for Medical and Health Research Involving Human Subjects (including information about the deceased that can identify a specific individual)

- ① Personal information shall not be obtained using an improper methods.



1. Responsible Conduct of Research

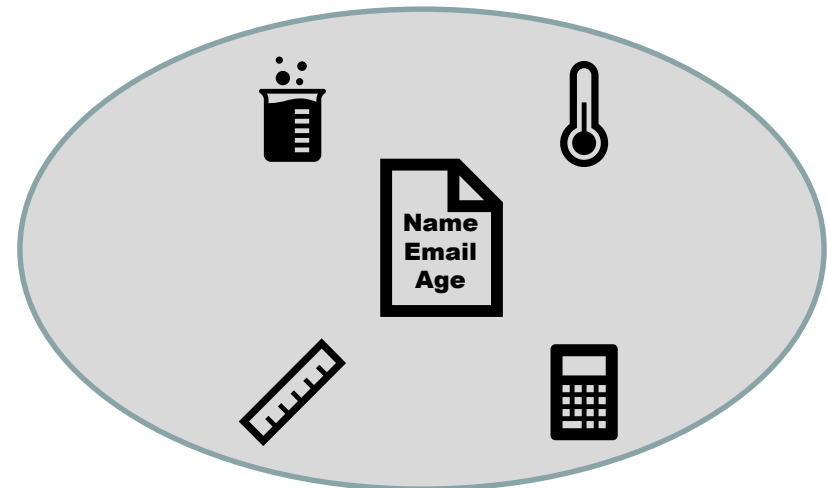
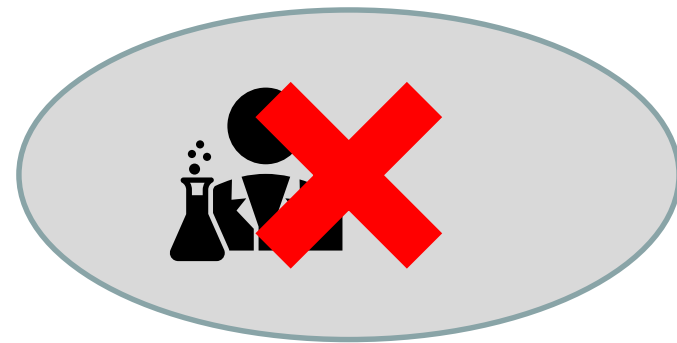
1. 4. Data Handling

Scientists' Responsibility for Personal Information

Ethical Guidance for Medical and Health Research Involving Human Subjects (including information about the deceased that can identify a specific individual)

- ② Personal information shall not be used beyond the scope necessary to accomplish the purpose of its use specifically explained to the subject when obtaining informed consent.

Experiment ???



Experiment ABC

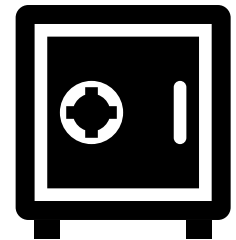
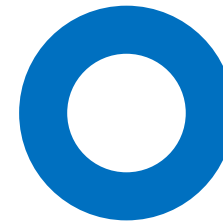
1. Responsible Conduct of Research

1. 4. Data Handling

Scientists' Responsibility for Personal Information

Ethical Guidance for Medical and Health Research Involving Human Subjects (including information about the deceased that can identify a specific individual)

- ③ Safety management shall be implemented to ensure that personal information is not leaked, lost, or damaged. In addition, handling of anonymized data, etc.



1. Responsible Conduct of Research

1. 4. Data Handling

Scientists' Responsibility for Personal Information

Enforcement rules of Clinical Trials Act

- ④ Identify the purpose of use to the greatest extent possible when handling personal information.
- ⑤ Efforts shall be made to maintain personal information accurately and currently within the scope necessary to accomplish the purpose of its use.
- ⑥ Stipulate conduct guidelines that lay down specific methods for ⑤, etc.

1. Responsible Conduct of Research

1. 4. Data Handling

Scientists' Responsibility for Personal Information

Humanities and social sciences

In the situation where one presents results while quoting unpublished documents or interview records

- ① In the original interview, to obtain consent from the interviewee concerning the objectives of the research, scope and format of disclosure, and whether or not his/her approval will be obtained before presentation.
- ② When quoting an interview record, to mention the interviewee's name, position and occupation, date, time, and location of the interview within the scope agreed upon by the interviewee.

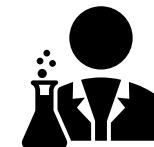
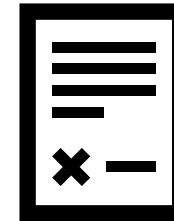
1. Responsible Conduct of Research

1. 4. Data Handling

Scientists' Responsibility for Personal Information Humanities and social sciences

In the situation where one presents results while quoting unpublished documents or interview records

- ① In the original interview, to obtain consent from the interviewee concerning **the objectives of the research, scope and format of disclosure**, and **whether or not his/her approval will be obtained** before presentation.



1. Responsible Conduct of Research

1. 4. Data Handling

Scientists' Responsibility for Personal Information

Humanities and social sciences

In the situation where one presents results while quoting unpublished documents or interview records

- ② When quoting an interview record, to mention the **interviewee's name, position and occupation, date, time, and location** of the interview **within the scope agreed upon by the interviewee.**



Maki
 Manager
 XYZ Company
 May 4, 2019
 ABC Lab



1. Responsible Conduct of Research

1. 4. Data Handling

Scientists' Responsibility for Personal Information

Humanities and social sciences

In the situation where one presents results while quoting unpublished documents or interview records

- ③ When quoting a historical source or document publicly displayed in an archive or a historical library, to cite **the name of the archive or library, title of the source/document, document number**, and other details. When using a deposited document and the deposition agreement **requires that the depositor be shown a rough draft of your presentation in advance**, to be sure to **comply with** that requirement.
- ④ If you have received special **permission** from an individual or a corporation to browse historical sources or documents, to **obtain prior agreement and clarify** the disclosure conditions, including to **what extent you may disclose the actual resources/documents, their existence**, and items containing **personal information**.

1. Responsible Conduct of Research

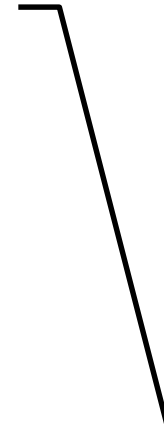
1. 4. Data Handling

Scientists' Responsibility for Personal Information Humanities and social sciences

In the situation where one presents results while quoting unpublished documents or interview records

- ③ When quoting a historical source or document publicly displayed in an archive or a historical library, to cite **the name of the archive or library, title of the source/document, document number**, and other details. When using a deposited document and the deposition agreement **requires that the depositor be shown a rough draft of your presentation in advance**, to be sure to **comply with** that requirement.

Tokyo Archives
 "Writings from Edo"
 Doc. No. 4853B
 ...



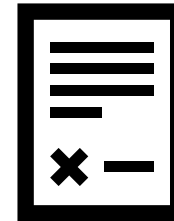
1. Responsible Conduct of Research

1. 4. Data Handling

Scientists' Responsibility for Personal Information Humanities and social sciences

In the situation where one presents results while quoting unpublished documents or interview records

- ④ If you have received special **permission** from an individual or a corporation to browse historical sources or documents, to **obtain prior agreement and clarify** the disclosure conditions, including to **what extent you may disclose the actual resources/documents, their existence**, and items containing **personal information**.



1. Responsible Conduct of Research

1. 4. Data Handling

Scientists' Responsibility for Personal Information

Humanities and social sciences

In the situation where one presents results while quoting unpublished documents or interview records

- ⑤ When quoting historical resources or documents, to pay especially close attention to information such as an individual's birth, lineage, economic status, death (including history of illnesses), and criminal history, because, while the individual may have lived in the past, such information may violate the privacy of his/her heirs or successors.

1. Responsible Conduct of Research

1. 4. Data Handling

Scientists' Responsibility for Personal Information

Humanities and social sciences

In the situation where one presents results while quoting **unpublished documents or interview records**

⑤ When quoting historical resources or documents, to **pay especially close attention to information such as an individual's birth, lineage, economic status, death (including history of illnesses), and criminal history**, because, while the individual may have lived in the past, **such information may violate the privacy of his/her heirs or successors.**



Born in Kyoto
 Parents from Kobe
 Wealthy family
 Died in Tokyo



(Green Book Text P29)

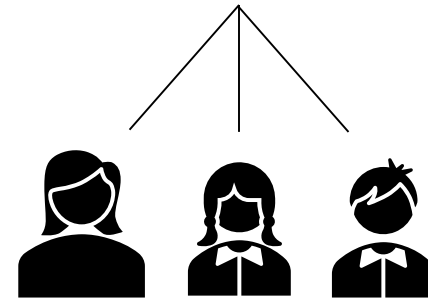
1. Responsible Conduct of Research

1. 4. Data Handling

Scientists' Responsibility for Personal Information Humanities and social sciences

In the situation where one presents results while quoting **unpublished documents or interview records**

⑤ When quoting historical resources or documents, to **pay especially close attention to information such as an individual's birth, lineage, economic status, death (including history of illnesses), and criminal history**, because, while the individual may have lived in the past, **such information may violate the privacy of his/her heirs or successors.**



(Green Book Text P29)

Contents

1. Responsible Conduct of Research (P.9~)
 - 1.1. What is a Responsible Research Activity? (P.10~)
 - 1.2. Misconduct in Research Activities (P.14~)
 - 1.3. Improper Use of Research Funds (P.42~)
 - 1.4. Data Handling (P.57~)
 - 1.5. Presenting Research Results (P.105~)
2. Norms and Rules of Scientists at Hiroshima University (P.141~)
3. Actual Case of Misconduct at Hiroshima University (P.149~)



1. Responsible Conduct of Research

1. 5.

Presenting Research Results

For the Sound Development of Science -The Attitude
of a Conscientious Scientist-

Section **IV** Presentation of Research Results

1. Responsible Conduct of Research

107

1. 5. Presenting Research Results

Credit for research results

- Recognition of a scientist's contribution to research is called "credit."
 - Authorship , indicating who has written a given paper
 - "Citations" of research conducted by other authors
 - Listing scientists who contribute to a research study in the "acknowledgements".

1. Responsible Conduct of Research

1. 5. Presenting Research Results

Who Should Be Listed as Authors?

Four criteria for one to be listed as a paper author

1. Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work;
2. Drafting the work or revising it critically for important intellectual content;
3. Final approval of the version to be published;
4. Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Source: The uniform requirements for manuscript submission by the International Committee of Medical Journal Editors (ICMJE)

1. Responsible Conduct of Research

109

1. 5. Presenting Research Results

Who Should Be Listed as Authors?

Four criteria for one to be listed as a paper author

1. Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work;



Source: The uniform requirements for manuscript submission by the International Committee of Medical Journal Editors (ICMJE)

(Green Book Text P50)

1. Responsible Conduct of Research

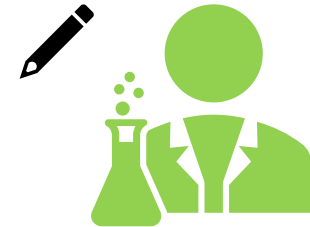
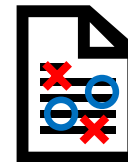
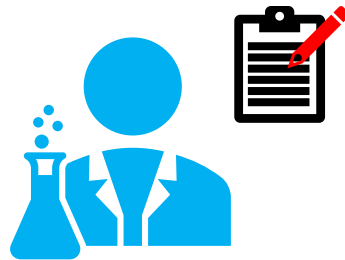
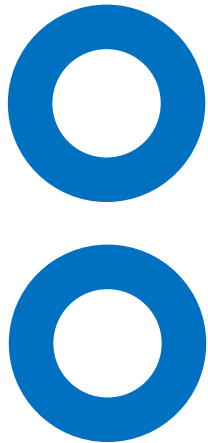
110

1. 5. Presenting Research Results

Who Should Be Listed as Authors?

Four criteria for one to be listed as a paper author

2. Drafting the work or revising it critically for important intellectual content;



Source: The uniform requirements for manuscript submission by the International Committee of Medical Journal Editors (ICMJE)

(Green Book Text P50)

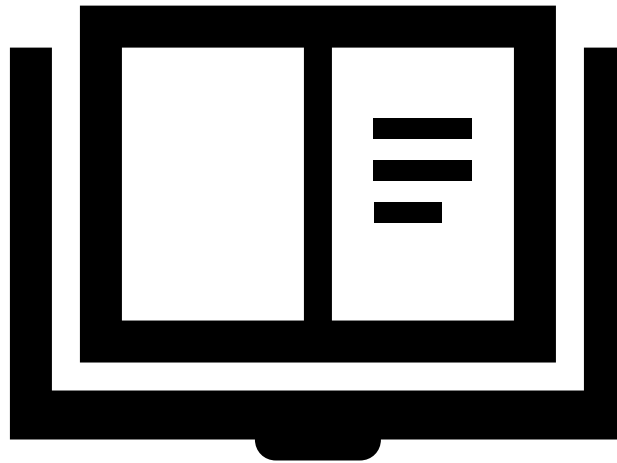
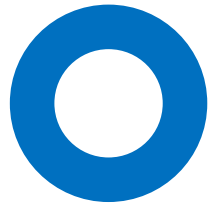
1. Responsible Conduct of Research

1. 5. Presenting Research Results

Who Should Be Listed as Authors?

Four criteria for one to be listed as a paper author

3. Final approval of the version to be published;



Source: The uniform requirements for manuscript submission by the International Committee of Medical Journal Editors (ICMJE)

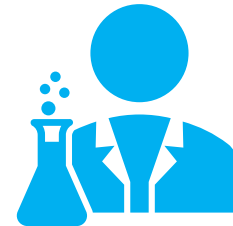
1. Responsible Conduct of Research

1. 5. Presenting Research Results

Who Should Be Listed as Authors?

Four criteria for one to be listed as a paper author

4. Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.



Source: The uniform requirements for manuscript submission by the International Committee of Medical Journal Editors (ICMJE)



1. Responsible Conduct of Research

1. 5. Presenting Research Results

Who Should Be Listed as Authors?

Four criteria for one to be listed as a paper author.

1. Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work;
 2. Drafting the work or revising it critically for important intellectual content;
 3. Final approval of the version to be published;
 4. Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.
- These are the conditions that must be satisfied to be eligible for authorship; conversely, people who satisfy all of these conditions must be listed as authors.

1. Responsible Conduct of Research

114

1. 5. Presenting Research Results

Who Should Be Listed as Authors?

- These are the conditions that must be satisfied to be eligible for authorship; conversely, people who satisfy all of these conditions must be listed as authors.

 1. 

 2. 

 3. 

 4. 


1. Responsible Conduct of Research

115

1. 5. Presenting Research Results

Improper Authorship

- Gift Authorship

- In a case in which a true author, out of kindness, gives authorship to someone not deserving it.
- Other cases where persons in a more powerful position than a true author add their names as authors of a paper, taking advantage of their superior position. Conversely, there are cases where a true author adds to the list of authors someone close to him/herself or someone who can give the true author an advantage if listed as an author.

1. Responsible Conduct of Research

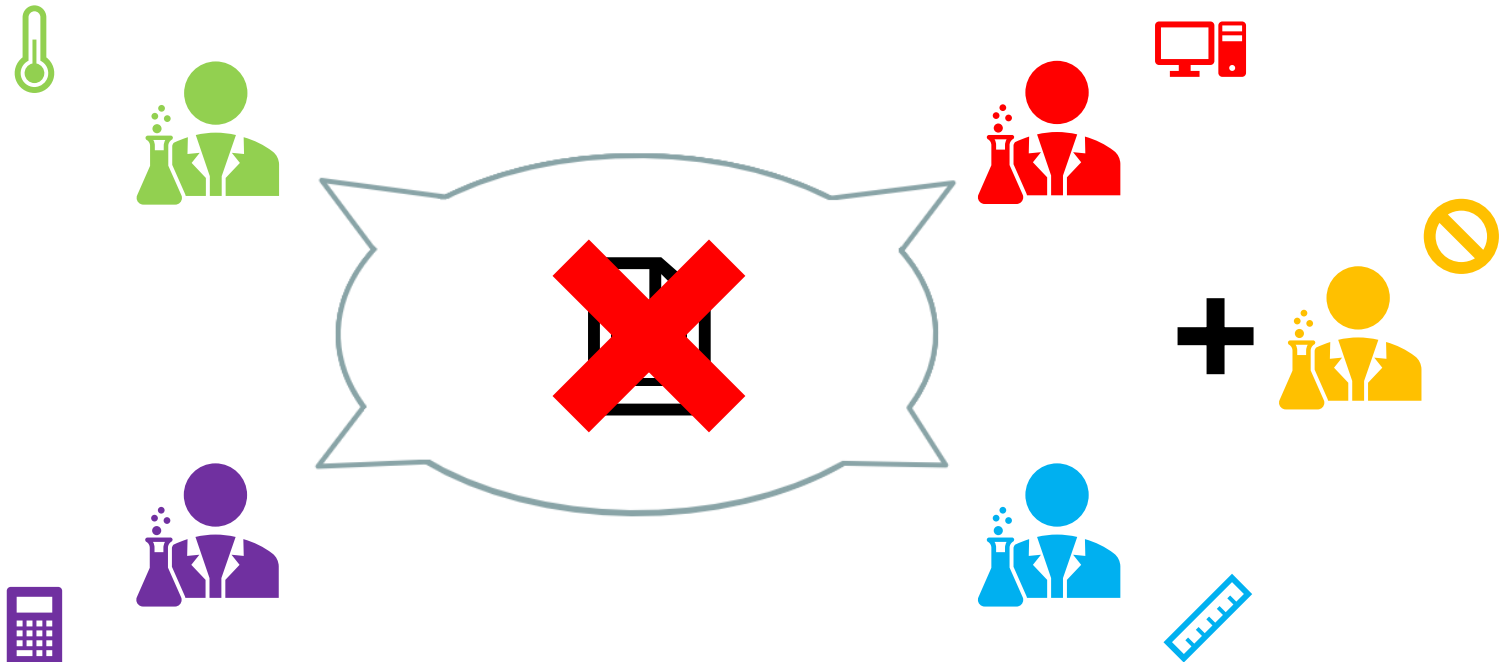
116

1. 5. Presenting Research Results

Improper Authorship

- Gift Authorship

- In a case in which a true author, out of kindness, gives authorship to someone not deserving it.



(Green Book Text P51)

1. Responsible Conduct of Research

1. 5. Presenting Research Results

Improper Authorship

- Gift Authorship

- Other cases where persons in a more powerful position than a true author add their names as authors of a paper, taking advantage of their superior position. Conversely, there are cases where a true author adds to the list of authors someone close to him/herself or someone who can give the true author an advantage if listed as an author.



(Green Book Text P51)

1. Responsible Conduct of Research

1. 5. Presenting Research Results

Improper Authorship

- Ghost Authorship

- A truly deserving author is not given credit as an author.
- Even when the graduate student's experiments, data collection, and analyses were carried out under the guidance of the professor, the graduate student should be named as an author when s/he has made a substantial contribution to the research.
- The Diovan Scandal can be one of the examples where an employee of a pharmaceutical company carrying out clinical research and analysis of data but only university-affiliated researchers are listed as authors of the paper. (See P15)

1. Responsible Conduct of Research

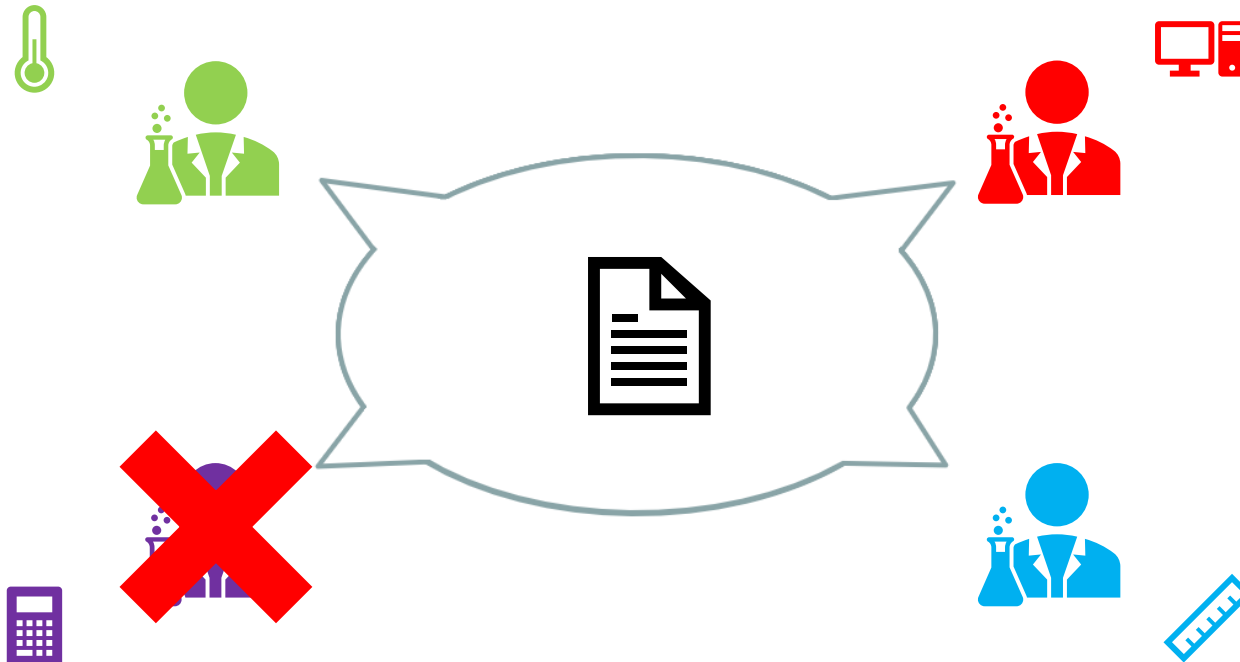
119

1. 5. Presenting Research Results

Improper Authorship

- Ghost Authorship

- A truly deserving author is not given credit as an author.



(Green Book Text P68)

1. Responsible Conduct of Research

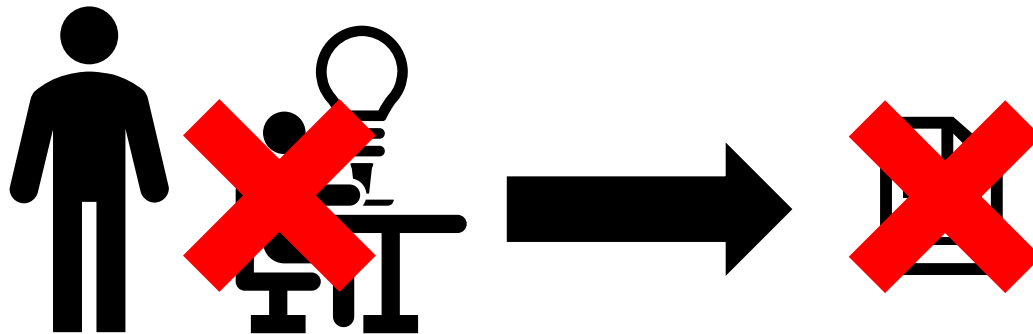
120

1. 5. Presenting Research Results

Improper Authorship

- Ghost Authorship

- Even when the graduate student's experiments, data collection, and analyses were carried out under the guidance of the professor, the graduate student should be named as an author when s/he has made a substantial contribution to the research.



(Green Book Text P68)

1. Responsible Conduct of Research

121

1. 5. Presenting Research Results

Improper Authorship

- Ghost Authorship

- The Diovan Scandal can be one of the examples where an employee of a pharmaceutical company carrying out clinical research and analysis of data but only university-affiliated researchers are listed as authors of the paper. (See P15)



(Green Book Text P68)



1. Responsible Conduct of Research

1. 5. Presenting Research Results

Duplicate posting and duplicate publication

- Duplicate posting and duplicate publication are not acts of an author disclosing information already made available to the public.
- When submitting a research paper, if an important part of the paper has already been presented elsewhere, that fact needs to be made clear.



1. Responsible Conduct of Research

1. 5. Presenting Research Results

Duplicate posting and duplicate publication

- Duplicate posting and duplicate publication are not acts of an author disclosing information already made available to the public.



(Green Book Text P52)

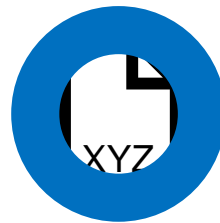
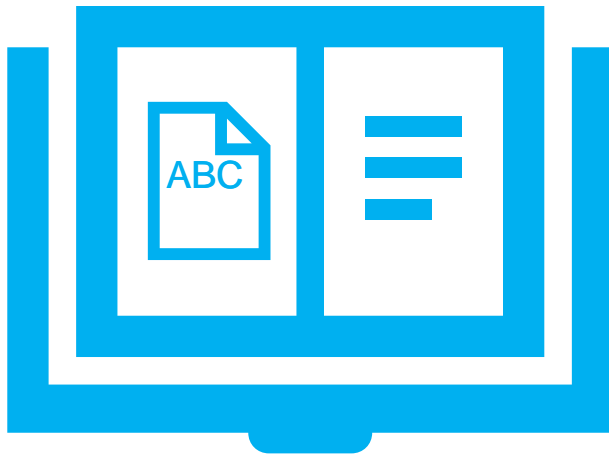


1. Responsible Conduct of Research

1. 5. Presenting Research Results

Duplicate posting and duplicate publication

- When submitting a research paper, if an important part of the paper has already been presented elsewhere, that fact needs to be made clear.



1. Responsible Conduct of Research

1. 5. Presenting Research Results

Duplicate posting and duplicate publication

Be careful in the case of doctoral thesis!!

- In particular, Japan's regulations on academic degrees were revised in 2013, replacing dissertations printed on paper with dissertations presented over the Internet.
- With this, it will be normal for a doctoral dissertation to appear on the Web within one year following the awarding of a degree.
- When one submits a paper based on a doctoral dissertation, this fact must be reported to the academic journal.



1. Responsible Conduct of Research

1. 5. Presenting Research Results

Duplicate posting and duplicate publication(doctoral thesis)

FAQ on Research Ethics (Excerpt of parts related to dissertation)		
No.	Q	A
1	I would like to publish my doctoral thesis from a publisher. Would it be considered duplicate publication?	In accordance with the revision of regulations on academic degrees made in 2013, doctoral theses are disclosed on WEB (Hiroshima University Institutional Repository) . Whether this case applies to duplicate publication or not varies and depends on the practice of your major and policies of the publisher. Please consult with supervisors and the publisher.
2	(snip) The explanation was given that because of the revision of regulation on academic degrees made in 2013, it will become a regular practice that doctoral theses will be disclosed within 1 year on the web. If there are contents related to patents in a doctoral thesis, how should we deal with the new practice? Will it lead to loss of novelty because of disclosure?	In compliance with Hiroshima University Degree regulations, doctoral theses shall be disclosed with all their contents within one year from when the dissertation is accepted. However, in unavoidable circumstances where the disclosure possibly leads to the loss of novelty, the summary of the doctoral thesis would be replaced with the entire thesis after receiving approval of the president. Such special circumstances include planning for an application for patent and application and you will file a claim by submitting a Doctoral Dissertation Submission and Publication Confirmation (Application Form)" . Please contact the Student Support Office of your graduate school if your dissertation has other reasons.
3	(snip) The explanation was given that because of the revision of regulation on academic degrees made in 2013, it will become a regular practice that doctoral theses will be disclosed within 1 year on the web. How can we post our doctoral theses in books?	Please ask the publisher after taking a closer look at your contract with the publisher. In cases where your dissertation cannot be disclosed, with the president's approval, it is possible to publish a summary of your dissertation content instead of the entire dissertation, after acknowledging the circumstance and undertaking the appropriate procedure.
4	How can a person, who already obtains a (doctoral) degree, register one's dissertation on Repository?	A person, who acquired a degree before 2012, is needed to submit Agreement to Allow the Deposit of My Doctoral Thesis in "Hiroshima University Institutional Repository (HiR) when the person register one's dissertation. Please contact Library Information Planning Group. For who obtained a degree after 2013, please contact Management Support Office.



1. Responsible Conduct of Research

1. 5. Presenting Research Results

“Salami Slicing” in Publishing

- The act of publishing one research as multiple smaller studies (slices cut out from the main study) is referred to as “salami publishing” or “bologna publishing.”
- This practice not only artificially exaggerates one’s accomplishment, but it is also problematic because it makes it difficult to grasp the overall significance of the research and unnecessarily wastes other scientists’ time.

1. Responsible Conduct of Research

1. 5. Presenting Research Results

Improper Referencing of Prior Research

- To give proper credit to research conducted in the past, it is essential to carefully investigate prior research and appropriately reference it when writing a paper.
- There are cases when a research group intentionally omits reference to prior research done by a competing research group.



1. Responsible Conduct of Research

1. 5. Presenting Research Results

When Using Someone Else's Copyrighted Material

- When preparing and using a secondary work that copies or modifies someone else's work, generally one must first **obtain permission from the owner of the copyright of that work.**
- The copyright of a work published in a journal or other publications normally belongs to the publisher, so an author may need to **obtain permission from the publisher to use that article even if it was written by the author him/herself.**
- When a scientist's research results are reported in a newspaper or other media, s/he may **want to share the report or coverage by including it on a website.**

1. Responsible Conduct of Research

130

1. 5. Presenting Research Results

Secondary Use When No Permission of the Copyright Owner Is Necessary

- In the following cases for example, no permission is needed unless transfer is expressly prohibited: Use of a work excluded from the protection of the Copyright Act by a national law or a local ordinance, duplication for a personal use, and use of a work whose copyright-protection period has expired.

1. Responsible Conduct of Research

131

1. 5. Presenting Research Results

Secondary Use When No Permission of the Copyright Owner Is Necessary

- When “quoting” someone else’s work or using part of someone’s work for educational or examination purposes, no permission is necessary as long as proper procedures are observed.
 - Acts that referring to some part of someone’s copyrighted material in one’s own work are called “quotation”.
 - According to the Copyright Act, it is permissible to quote from a work “already made public” provided that it is “compatible with fair practice” and “to the extent justified by the purpose of the quotation such as news reporting or research critiquing.”

(Green Book Text P55)

1. Responsible Conduct of Research

1. 5. Presenting Research Results

Requirement of quotation

Direct quotation

- (1) Use materials for quotation that have already been published.
- (2) Quote within an “appropriate range” for criticism and study.
- (3) Clearly express the master-subordinate relationship for your sentences and quotation.
- (4) Use quotation marks, etc. to make the quotation clear.
- (5) Demonstrate the necessity of quotation.
- (6) Indicate the written sources clearly.

Indirect quotation

- (1) Do not use the sentences as they are, but paraphrase in your own words.
- (2) Do not modify the gist of the original sentences.

1. Responsible Conduct of Research

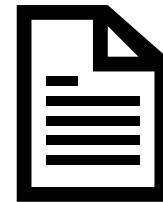
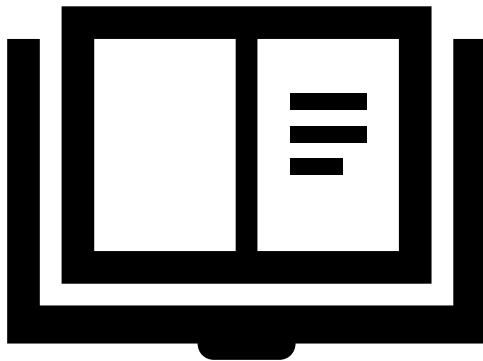
133

1. 5. Presenting Research Results

Requirement of quotation

Direct quotation

(1) Use materials for quotation that have already been published.



1. Responsible Conduct of Research

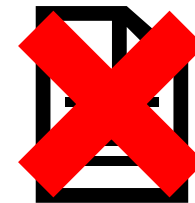
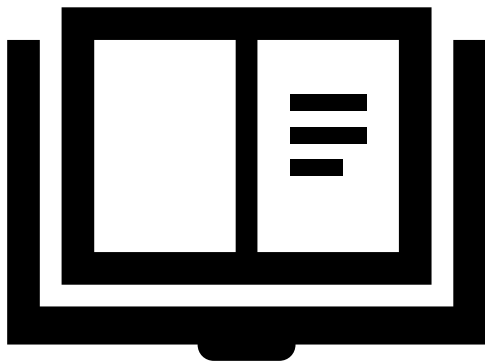
134

1. 5. Presenting Research Results

Requirement of quotation

Direct quotation

(2) Quote within an “appropriate range” for criticism and study.



1. Responsible Conduct of Research

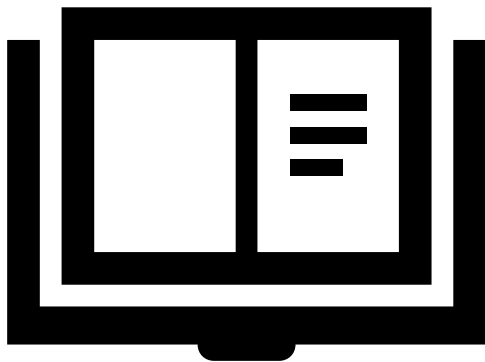
135

1. 5. Presenting Research Results

Requirement of quotation

Direct quotation

- (3) Clearly express the master-subordinate relationship for your sentences and quotation.



1. Responsible Conduct of Research

1. 5. Presenting Research Results

Requirement of quotation

Direct quotation

(4) Use quotation marks, etc. to make the quotation clear.

John Donne said, "No man is an island." This means that people need to depend on each other for help.

1. Responsible Conduct of Research

137

1. 5. Presenting Research Results

Requirement of quotation

Direct quotation

(5) Demonstrate the necessity of quotation.

John Donne said, "No man is an island." This means that people need to depend on each other for help.

1. Responsible Conduct of Research

138

1. 5. Presenting Research Results

Requirement of quotation

Direct quotation

(6) Indicate the written sources clearly.

John Donne said, "No man is an island." This means that people need to depend on each other for help.

1. Responsible Conduct of Research

139

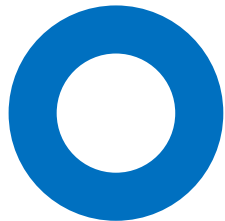
1. 5. Presenting Research Results

Requirement of quotation

Indirect quotation

- (1) Do not use the sentences as they are, but paraphrase in your own words.

~~Walt Disney once said that the nature of
just go on talking we are all fed up with what it
the world to us you are a child"~~
- Walt Disney



1. Responsible Conduct of Research

140

1. 5. Presenting Research Results

Requirement of quotation

Indirect quotation

(2) Do not modify the gist of the original sentences.

~~Walt Disney once said that~~
~~just one thing everyone should~~
~~the world was once a child"~~

- Walt Disney





1. Responsible Conduct of Research

1. 5. Presenting Research Results

White papers, reports, etc.,
published by government and
municipal offices

Authors **MUST** quote accurately when
writing academic papers/theses.

Authors always **MUST** **source the origin of the information** even from public sector's publications because of their copyrights.

(Example)

Source: Ministry of ○○ website (URL of applicable page)

Source: Ministry of ○○ “○○survey report” (URL of applicable page)

In the case of editing and processing, state to that effect.

(Example)

Source: ○○ Ministry website (URL of the corresponding page)

*Please refer to the websites of the relevant organizations for details.



- Wikipedia is certainly a useful tool. However, easily copying and pasting from Wikipedia articles when writing a paper can lead to research misconduct. In fact, there have actually been cases in which research misconduct was identified. It is also not appropriate as basic material for academic research.



Caution!

A yellow starburst graphic with a blue outline, containing the word "Caution!" in red text.

Contents

1. Responsible Conduct of Research (P.9~)
 - 1.1. What is a Responsible Research Activity? (P.10~)
 - 1.2. Misconduct in Research Activities (P.14~)
 - 1.3. Improper Use of Research Funds (P.42~)
 - 1.4. Data Handling (P.57~)
 - 1.5. Presenting Research Results (P.105~)
2. Norms and Rules of Scientists at Hiroshima University (P.141~)
3. Actual Case of Misconduct at Hiroshima University (P.149~)



2. Norms and Rules of Scientists at Hiroshima University

2. Norms and Rules of Scientists at HU

146

A code of conduct for scientist at Hiroshima University

Hiroshima University Five Guiding Principles

① The Pursuit of Peace

② The Creation of New Forms of
Knowledge

③ The Nurturing of Well-Rounded
Human Beings

④ Collaboration with the Local, Regional, and
International Community

⑤ Continuous Self-
Development

2. Norms and Rules of Scientists at HU

A code of conduct for scientist at Hiroshima University

Hiroshima University Five
Guiding Principles

① The Pursuit of Peace

② The Creation of New Forms of
Knowledge

③ The Nurturing of Well-Rounded
Human Beings

④ Collaboration with the Local, Regional, and
International Community

⑤ Continuous Self-
Development

- Those who get involved in scientific research should make utmost efforts to contribute to world peace and to exclude acts that threaten the peace.
- Following Hiroshima University's vision (five principles), scientists take responsibilities for contributing to human society with pride.
- With the awareness of social responsibility, scientists conduct research appropriately and use research funds ethically.

※ Hiroshima University established a code of conduct of research and use of research funds.

Regulations at Hiroshima University

Regulations concerning research misconduct

Hiroshima University's regulations concerning prevention of misconduct and response to cases

- Prevention of research misconduct → Conducting research ethics training
Storing and managing research materials, etc.
- Measures against misconduct → Roles of Investigation Committee for Research Misconduct

Regulations concerning application for research

Examples: Animal experiments, Recombinant DNA experiments, Conflicts of interest

2. Norms and Rules of Scientists at HU

Hiroshima University's regulations concerning prevention of misconduct and response to cases

Stipulations of research misconduct

- Fabrication, falsification, or plagiarism either willfully or due to gross neglect of the basic duty of care expected of a researcher.
- Duplicate posting and duplicate publication
- Improper authorship
- The conduct found as research misconduct in each research field considering the international attitude of the scientific community
- Destruction of evidence of fabrication, falsification and plagiarism or interference of verification (including hiding, disposal and ill-management of experimental records which are required to reproduce and replicate the experiment)

Regulations at Hiroshima University

Regulations concerning improper use of research funds

Hiroshima University's regulations concerning improper use of research funds

○ Prevention of improper use of research funds



Conducting compliance

Mandatory confirmation of compliance with regulations

○ Measures against improper use



Roles of organizations such as the Investigation Committee for Improper Use



3. Actual Case of Misconduct at Hiroshima University

Actual Case of Misconduct at Hiroshima University

- (1) Misconduct in Research Activities
- (2) Improper Use of Research Funds
- (3) Disciplinary Actions and Impacts

Actual Case of Misconduct at Hiroshima University

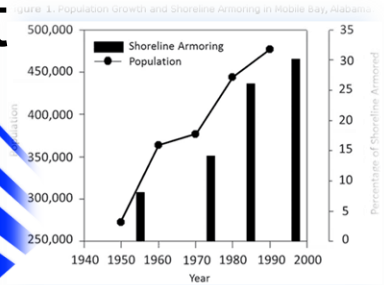
(1) Misconduct in Research Activities

Plagiarism (case 1)

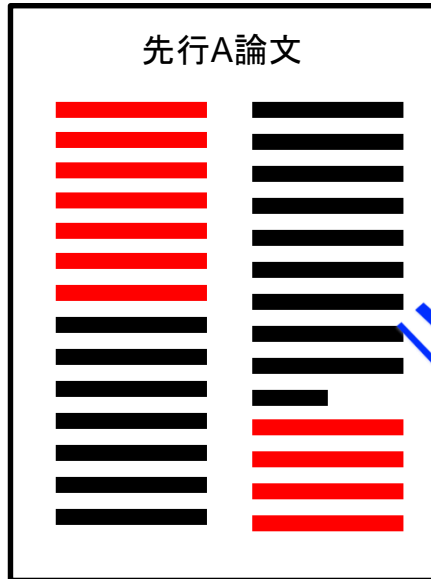
(1) Misconduct in research activities

154

“Patchwork papers” without quotations indicated



Adapted with permission from Douglass and Pickel 1999, this figure depicts the rate and extent of shoreline armoring in Mobile Bay. The vertical bars in the main graph show the proportion of armoring while the line depicts the population.



I didn't mean it.
I just forgot to cite the quotations...
And it was only a few places.

BUT



As a result of an investigation, several other incidences of negligence came to light, and the case was judged to be a “gross neglect in the basic **duty of care** expected to be exercised by researchers ,” and thus “**plagiarism.**”

Fabrication (at poster presentation : case 4) 157

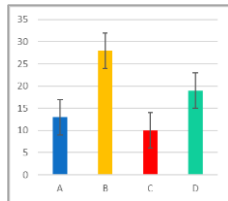
Former Assistant Professor A
[Lead speaker]

① Graphs and images

For convenience, graphs and images that differed from the established conditions (drug administration period) were published

Have no data under the established conditions

Significant difference under other conditions



Published

Found to have been involved in fabrication

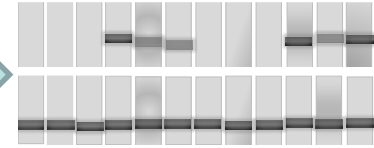
② PCR band diagram (mouse)

Digital images were cut and pasted to create the expected results

Digital images (original data)



Posted



Cut and pasted

Even though A discussed with Professor B (the responsible author) about how to correct the poster by the day before the poster presentation, no correction was actually made and the poster was presented as is.

Professor B
[Responsible author]

Realized that the poster graph, images, and PCR band diagram had errors (but was unaware of the actual situation of ② were cut and pasted), and discussed how to correct the poster with Former Assistant Professor A by the day before the presentation.

However, on the day of the presentation, B did not confirm whether the corrections had been made.

Although not found to have been involved in fabrication, Professor B was found to be responsible for the poster presentation as research misconduct

There is no need to cite a quotation if I change the text a little. This is my writing.

〇〇〇

I just submitted something that reviews and outlines existing research; it is not a thesis.

〇〇〇

It slipped my mind.

〇〇〇



There is no need to cite a quotation if I change the text a little. This is my writing.

Insufficient understanding of quotation (direct and indirect).
No respect for existing research.

I just submitted something that reviews and outlines existing research; it is not a thesis.

Anything presented as a publication naturally involves responsibility on the part of the author.

It slipped my mind.

Great care should be taken not to neglect duty of care as a researcher. Depending on the circumstances, it can lead to serious problems.



Research misconduct is not only intentional.

Alarming, research misconduct can be committed accidentally as well.

For example,

“I didn’t know the Research methods” is not a valid reason.

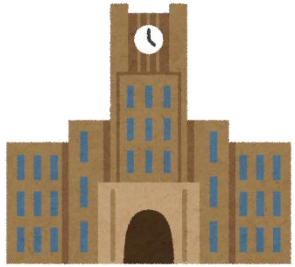
Depending on the circumstances, “carelessness” can also constitute research misconduct



Actual Case of Misconduct at Hiroshima University

(2) Improper Use of Research Funds

Fictitious claims for honoraria



Hiroshima University



STEP 2

Report on payment of honoraria for fictitious work

STEP 1

Hiroshima University's Professor X

We'll say that you helped in the experiments, okay?

Hand the reward you're paid over to me

Okay, understood

Research group students



Hiroshima University's Professor X

Reward paid from the university to students

Research group students



Claim for honoraria for fictitious experimental assistance using the names of the students in the research group



Double payment of travel expenses



Hiroshima University



A University

- Business trip report
- Hotel receipts
- Railway tickets, etc.

Business trip report only
(A University does not require submission of hotel receipts, etc.)



Hiroshima University travel expenses



Hiroshima University's Professor X



A University travel expenses

Claim made to both universities for travel expenses for the same trip, and double payment received

Actual Case of Misconduct at Hiroshima University

(3) Disciplinary Actions and Impacts

Hiroshima University Student Disciplinary Regulations

Fabrication, falsification, plagiarism

⇒ Expulsion or suspension

Improper use of research funds

⇒ Suspension or reprimand



Previous examples of discipline for research semiconductor by faculty members at Hiroshima University ...

166

An academic advisor published a journal article, using the ideas prepared by his/her graduate advisee for a presentation in a seminar, without obtaining the consent of the graduate student (plagiarism) + harassment

=> **Dismissal under instruction**

Most of a joint written paper published as the corresponding author was plagiarized from other papers

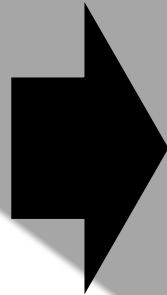
⇒ **Suspended**

Money paid for fictitious delivery notices/invoices was handled as “deposits” to a vendor. Discovered when the vendor was audited ⇒ **Suspended**

Consequences of research misconduct other than punishment of individuals

Public disclosure of research misconduct
Retraction of papers
Repayment of research funds, etc.

Implementation of diversity-wide measures to prevent recurrence



Loss of public trust, not only for the individual in question, but also for the diversity

Increased burden for research activities

The impact of just one case of research misconduct on the diversity and other researchers is extremely severe



**Never commit
research
misconduct!!!**

Contact for inquiries and reports

If you suspect research misconduct, you can contact the following:

<Contact on campus>

- Fabrication
- Falsification
- Plagiarism
- etc.

**Chief Manager of Research and Academia-Government-Community Collaboration
Research Support Group, Office of Research and Academia-Government-Community
Collaboration, Hiroshima University**

- Address : 1-3-2 Kagamiyama, Higashi-Hiroshima City Hiroshima, 739-8511
(1F, Administration Bureau Building)
- Direct phone number : (082)424-5679
- Fax : (082)424-5890
- Email : kokuhatsu@office.hiroshima-u.ac.jp

- Improper Use of Research Funds

Hiroshima University Audit Office

- Address : 1-3-2 Kagamiyama, Higashi-Hiroshima City Hiroshima, 739-8511
(6F, Administration Bureau Building)
- Direct phone number : (082)424-6068
- Fax : (082)424-4251
- Email : kansa-situcho@office.hiroshima-u.ac.jp

<External contact>

- Fabrication
- Falsification
- Plagiarism
- etc.

- Improper Use of Research Funds

Sato Law Office (Attorney : Takafumi Sato)

- Address : 1-20 Teppo - cho , Naka - ku , Hiroshima City , 730 - 0017
(6F , 3rd Ueno Building)
- Direct phone number : (082)227-1246
- Fax : (082)227-1690
- *Call/visit time 9:30-12:00, 13:00-17:00
(Closed on Saturday, Sunday, national holidays, Year-End and New Year holidays, and Obon holidays)

Contact for inquires

170

Fabrication

Falsification

Plagiarism

etc.

**Chief Manager of Research and Academia-Government-Community Collaboration
Research Support Group, Office of Research and Academia-Government-Community
Collaboration, Hiroshima University**

- Address : 1-3-2 Kagamiyama, Higashi-Hiroshima City Hiroshima, 739-8511
(1F, Administration Bureau Building)
- Direct phone number : (082) 424-5679
- Fax : (082) 424-5890
- Email : kokuhatsu@office.hiroshima-u.ac.jp

The following contact information is for inquiries regarding administrative procedures and rules for the use of research funds at Hiroshima University.

<General Inquiries>

**Chief Manager of Research and Academia-Government-Community Collaboration
Research Collaboration Group, Office of Research and Academia-Government-
Community Collaboration, Hiroshima University**

- Address : 1-3-2 Kagamiyama, Higashi-Hiroshima City Hiroshima, 739-8511
(2F, Administration Bureau Building)
- Direct phone number : (082) 424-4614
- Email : gakujutu-k-gl@office.hiroshima-u.ac.jp

Conclusion

Conclusion

172

The class on the Basic RCR Program for Graduate Students ends here.

Keep learning through the following Q&A session, as well as exploring more about the characteristics and etiquette of your specialty and field.

Materials for Research Ethics Education

① Today's Textbook

For the Sound Development of Science -The Attitude of a Conscientious Scientist-

Section I What Is a Responsible Research Activity ?

Section II Planning Research

Section III Conducting Research

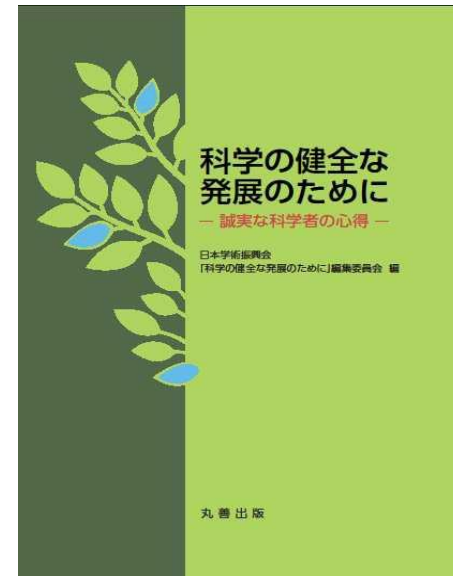
Section IV Presentation of Research Results

Section V How to Conduct Joint Research

Section VI Appropriate Use of Research Funds

Section VII Contributing to Quality Improvement in Scientific Research

Section VIII For the Progress of Society



Commonly known
as Green Book

Full texts are available online

http://www.mext.go.jp/a_menu/jinzai/fusei/1353972.htm

② Booklets and Subjects

- **Distribution of Ethical Guide for Academic Research**
(in Japanese, English and Chinese)

A booklet that briefly overviews research ethics (**Revised 2016.3**)

Momiji→Academic Support → Graduate Education →Ethical Guide for Academic Research

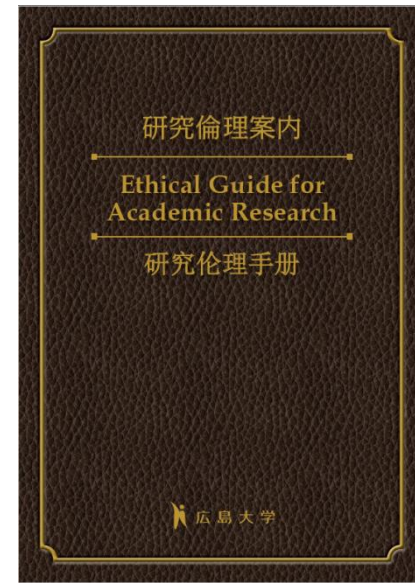
- **Distribution of “Rules and Guidelines for Writing a Report”**
(in Japanese, English and Chinese)

A booklet briefly overviews rules and guidelines (plagiarism, copyright, quotation, etc.) (**Revised 2016.3**)

Momiji→Academic Support →Undergraduate Education→ Rules and Guidelines for Writing a Report

- **Research Ethics Cultivating Field (Courses to cultivate the ethics that are required in relation to the society) in the Common Subjects of Graduate School**

In order to develop human resources that can serve as leaders in society, that can see things from comprehensive perspectives, that can express their thoughts, that have time management ability and ethical sense, and that can solve problems, a subject, Research Ethics Cultivating Field (Courses to cultivate the ethics that are required in relation to society), is included in courses that all graduate students can take as common subjects.



③ e-learning

APRIN e-learning

<https://www.aprin.or.jp/e-learning>

Responsible Conduct of Research: Fundamentals (Humanities)

Misconduct in Research, Plagiarism, collaborative Research, Peer Reviews, Managing Public Research Funds

Responsible Conduct of Research: Fundamentals (RCR-S) (Science & Technology)

Research Misconduct, Ethical Issues in the Management of Data in Engineering Research, Responsible Authorship, Ethical Issues in the Peer Review and Publication of Engineering Research, Collaborative Research in Engineering Fields, Whistleblowing and the Obligation to Protect the Public, Managing Public Research Funds

Responsible Conduct of Research: Fundamentals (RCR) (Medicine)

Responsible Conduct of Research, Research Misconduct, Data Handling, Rules for Collaborative Research, Conflicts of Interest, Authorship, Plagiarism, Communicating Information to the Public, Peer Review, Mentoring, Managing Public Research Funds, 〈Digest Version〉 Responsible Conduct of Research

Units other than those listed above are offered.

JSPS e-learning(eL CoRE)

<https://www.netlearning.co.jp/clients/jsp/clients/jsp/top.aspx>

This is animated teaching material created based on JSPS“For the Sound Development of Science -The Attitude of a Conscientious Scientist-”(Green Book) This material enables learners to learn and think. Learners undertake tests for each sections. Operation started April, 2016.

【 Books 】

1. 『科学者をめざす君たちへ: 科学者の責任ある行動とは』 池内了訳, 化学同人, 1995年.
(On Being a Scientist: Responsible Conduct in Research, by the Committee on Science, Engineering, and Public Policy of the National Academy of Sciences of the United States. 1995)
2. 『科学者の不正行為: 捏造・偽造・盗用』 山崎茂明著, 丸善, 2002年.
3. 『ORI研究倫理入門: 責任ある研究者になるために』 山崎茂明訳, 丸善, 2005年. (ORI Introduction to the Responsible Conduct of Research, by Nicholas H. Steneck, Office of Research Integrity.2003.)
4. 『背信の科学者たち: 論文捏造、データ改ざんはなぜ繰り返されるのか』 牧野賢治訳、講談社 (ブルーバックス), 2006年. (Betrayers of the Truth: Fraud and Deceit in the Halls of Science, by William Broad and Nicholas Wade, Simon & Schulster. 1982.)
5. 『パブリッシュ・オア・ペリッシュ: 科学者の発表倫理』 山崎茂明著, みすず書房, 2007年.
6. 『科学を志す人びとへ: 不正を起こさないために』 科学者倫理検討委員会編, 化学同人, 2007年.
7. 『科学の健全な発展のために: 誠実な科学者の心得』 日本学術振興会「科学者の健全な発展のために」編集委員会編, 丸善, 2015年. (英語版: For the Sound Development of Science: The Attitude of a Conscientious Scientist, Japan Society for Promotion of Science Editing Committee “For the Sound Development of Science”)
8. 『研究不正 科学者の捏造、改竄、盗用』黒木登志夫著, 中公新書, 2016年
9. Hiroshima University, *An Introduction to Research Ethics*, (2016, March) (in Japanese, English and Chinese)
10. Hiroshima University, *Rules and Guidelines for Writing a Report*, (2016, March) (in Japanese, English and Chinese)

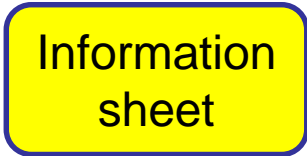


Information sheet(1. 4. Data Handling)

Organizing information on the storage of research materials, etc.

Our university's initiatives

『Guidelines for storage of research material, etc. at Hiroshima University』



To decide a format



In accordance with the uniqueness of each research field, the sheet can be revised.

To download : Iroha»Procedures»2.Procedures and Systems concerning research»5.Research ethics

○Basic information :

The title of a paper, storage period and the person in charge of storage

○Information of researchers, etc:

Author of the paper, where the paper is submitted and relevance to dissertation

○Author information : authorship

○Research material information : material (documents and statistical data) and samples

○Research conduct information: LMO (Living Modified Organism), approval for animal experiment.

※By organizing information, prevent loss of information and conduct proper information management.

研究資料保存に関する情報整理票

研究資料保存責任者				No.						
基本情報	学術研究成果の論文題名・題目									
	学術研究成果の発表日	保存期間の満了日								
保存期間	資料(文書、数値データ、画像など)は原則として発表の後10年間					試料、装置試料(実験試料、標本)、装置などは原則として発表の後5年間				
	投稿論文筆頭著者 (First Author)					科研究費研究者番号				
学術研究成果の発表先等	連絡先となる代表著者 (Corresponding Author)					科研究費研究者番号				
	投稿した学術誌名									
研究者等の情報	学位論文との関係	<input type="checkbox"/> 関係なし		<input type="checkbox"/> 関係あり						
		博士・修士・学士の区分								
		学生の氏名								
		学位論文名								
		学位論文番号								
剽窃ソフトによる検証の有無	<input type="checkbox"/> 検証の結果、問題なし		<input type="checkbox"/> 検証をしていない							
著作者等に関する情報	1. Authorship 投稿論文に関する著者及び責任分担	氏名 (科研究費研究者番号)	a)企画・構想	b)実験実行	c)データ解析	d)理論解釈	e)草稿作成	f)重要な箇所への意見	g)その他	
2. Acknowledgement 投稿論文における研究遂行に寄与した者	氏名 (科研究費研究者番号)	h)執筆の補佐	i)技術面の協力	j)周知の理論の提示・示唆	k)施設の提供	l)資金提供	m)その他			
3. Acknowledgementに記載した研究資金										
研究資料の情報	資料(文書、数値データ、画像など)	資料の種類・態様	作成時期	媒体の種類	作成者	管理者	保存場所	秘密情報の有無	学術誌への投稿	その他
	試料(実験試料、標本、装置など)	資料の種類・態様	作成時期	媒体の種類	作成者	管理者	保存場所	秘密情報の有無	学術誌への投稿	その他
実験計画等	実験計画の該当	計画名(課題名)		実験責任者	承認番号	承認年月日	承認期間			
	実験計画の承認	<input type="checkbox"/> 遺伝子組換え生物等使用実験計画 <input type="checkbox"/> 動物実験計画 <input type="checkbox"/> 放射性同位元素使用実験計画 <input type="checkbox"/> 医の倫理に関する実験計画								
その他	その他特記事項									