

## Measures to prevent further instances of research misconduct

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RIKEN

- Following the problems that have become evident with the STAP cell papers, RIKEN will immediately put in place measures to restore public confidence in our research activities and ensure that this kind of research misconduct does not recur.
- For this purpose, a committee of outside experts will be convened to deliberate, within the context of the current case, the kinds of preventive measures that need to be implemented to ensure a misconduct-free research environment. The committee will be asked to present its findings at the earliest opportunity.
- Additionally, an internal reform office headed by the RIKEN president will be established to ensure that these measures are promptly and consistently implemented.

### Focus of preventive measures

- *Revamping regulations and procedures to prevent research misconduct and negligence*
  - ✓ Rigorous enforcement of RIKEN's internal checking mechanisms
  - ✓ Thorough implementation of educational measures on research ethics and the prevention of research misconduct
  - ✓ Measures to prevent plagiarism
  - ✓ Confirmation of the dissemination of, and strict adherence to, these measures
- *Establishing an environment in which young scientists can maximize their talents*
  - ✓ Improving the leadership structure for the oversight of young researchers
  - ✓ Enhancing education and support of young researchers
  - ✓ Revamping recruiting and hiring procedures
- *Clarifying approval procedures prior to publishing papers; drafting and implementing guidelines*
  - ✓ Clarify approval procedures for publishing research results
  - ✓ Draft and implement guidelines on publishing research results
- *Clarifying responsibilities for research results involving multiple researchers or research groups*
- *Revamping procedures for press releases and other PR announcements*

(Reference)

### **Additional information on the focus of preventive measures**

○ *Revamping regulations and procedures to prevent research misconduct and negligence*

RIKEN has regulations in place to prevent research misconduct from occurring, but more rigorous efforts are needed to make sure these regulations are fully understood throughout RIKEN. It will also be necessary to mandate, and institute, a system to confirm that all personnel comply with the measures and take the required courses and other educational programs on research misconduct.

Examples of measures to be implemented:

- ✓ *Organizational checking mechanisms*  
Management rules to ensure that supervisors appropriately fulfill their function to confirm that research is being carried out properly
- ✓ *Research ethics education and measures to prevent research misconduct*  
Specify the people responsible for ethics education, ascertain that relevant regulations and guidelines are fully understood throughout RIKEN, deliberate on effective methods of education to prevent research misconduct and negligence
- ✓ *Measures to prevent plagiarism*  
Checking mechanisms to prevent plagiarism
- ✓ *Thorough dissemination of policies and measures, and checking mechanisms to confirm compliance*  
Measures for regular, periodic confirmation of personnel compliance throughout RIKEN

○ *Establishing an environment in which young scientists can maximize their talents*

RIKEN is proactive in recruiting young scientists, but we must make greater efforts to contain the risks that come with their lack of experience and maturity. RIKEN already has in place a system for senior researchers to act as mentors to advise and instruct young researchers, but in the current case, this system did not function as it should have.

Examples of measures to be implemented:

- ✓ *Improving measures to educate and foster the development of young researchers*  
Deliberate on new measures that will allow for opinions to be freely expressed, and otherwise improve communication and information exchange across departments and research fields
- ✓ *Enhancing research ethics education and support of young researchers*  
Deliberate on how to provide basic knowledge on research ethics, including misconduct, as well as maintaining proper research records and handling data properly
- ✓ *Revamping of recruiting and hiring procedures*  
Deliberate on improved procedures for recruiting, screening, and selecting laboratory leaders

○ *Revamping procedures for press releases and other PR announcements*

Detailed and specific guidelines are needed for the procedures by which supervisors approve the publication of research results

Examples of measures to be implemented:

- ✓ *Clarify approval procedures immediately prior to paper publication*  
Specify items to be checked and procedures to follow before publishing research results
- ✓ *Draft and implement guidelines for publishing research results*  
Deliberate on appropriate guidelines that can be applied uniformly throughout RIKEN regardless of research field

○ *Clarify responsibilities for research results involving multiple researchers or research groups*

It is becoming increasingly common for several researchers, collaborating inside and outside RIKEN, to divide up responsibility for preparing research papers for publication. Guidelines are needed for procedures to confirm contents and data among the authors and to specify the allocation of roles and responsibilities.

Example of measures to be implemented:

- ✓ *Clarify the role to be played by the lead author vis-à-vis research results involving several researchers and research groups*

○ *Revamping procedures for press releases and other PR announcements*

In the current case, inappropriate statements, such as that comparing STAP cells to iPS cells, as well as some documents, were made public before they had been properly vetted by the researchers, research centers, or headquarters.

Example of measures to be implemented:

- ✓ *PR procedures need to be put in place to ensure that only objectively verified scientific facts are made public*