## Tohoku University Code of Conduct for Fair Research Activities Supplementary Explanation

## 1. The Purpose of the Code of Conduct

This Code of Conduct has been recompiled based on the "Draft Code of Conduct for Researchers at Tohoku University: A Handbook for Researchers" and the "Code of Conduct for Scientists" (Science Council of Japan). However, this Code of Conduct is designed not as a code of conduct for researchers, but as a code of conduct for research at Tohoku University.

Most codes of organizations and universities in other countries are for university research, and are not limited to researchers. Research is performed by diverse agents, including students, staff, and faculty. As institutions are also accountable as research performing agents, they set out university research guidelines, and on this basis, take more specific measures tailored to the respective individuals, including faculty, staff, and students.

In Japan, there are two types of codes of conduct: those for researchers or scientists; and those for university research activities. The Science Council of Japan's "Statement: Code of Conduct for Scientists" has influenced the former.

If this Code of Conduct were a "code of conduct for researchers," then "researchers" would need to be defined, and furthermore, a discussion would be needed on how undergraduate students, graduate students, staff and other researchers shall be treated. Moreover, the role and responsibility of the university would not be clearly set out from the subject matter. Based on the notion that a code of conduct should be comprehensive, this Code of Conduct was established to serve all research activities at Tohoku University, and defines "researchers" as "individuals engaged in research activities at Tohoku University, including faculty, staff, and students."

While the tendency of these codes of conduct is to hone in on preventing misconduct, the important task is to conduct oneself responsibly fulfilling the social mandate. This point is also underscored in the Science Council of Japan's "Statement: Code of Conduct for Scientists – Revised Version –."

#### (References)

- 18th World Medical Association (WMA) General Assembly, "Recommendations Guiding Physicians in Biomedical Research Involving Human Subjects" (Declaration of Helsinki) (June 1964).
- Science Council of Japan, "Statement: Code of Conduct for Scientists Revised Version –" (January 23, 2013).
- Tohoku University Research Promotion Council, "Researchers' Manners: With Love for and Pride in Science" (April 2007).

## 2. The Principles of Fair Research Activities

The principles for research activities that should be adhered to are identified. The Code of Conduct adopts the principle elements of the "Draft Code of Conduct for Researchers at Tohoku University: A Handbook for Researchers," and consulted "The European Code of Conduct for Research Integrity" (March 2011) of the European Science Foundation and All European Academies regarding international standards.

Against the background of expanding international joint research, the principles included are compatible with global norms, and promote respect for the laws, ordinances, and norms of other countries.

## (References)

- Report by the Standing Committee on Science and Society, Science Council of Japan, "Scientific Misconduct and its Prevention" (June 24, 2003).
- Report by the Standing Committee on Science and Society, Science Council of Japan, "The Current State of Misconduct and Measures to Combat It: Toward an Autonomous Community of Scientists" (July 21, 2005).
- Council for Science and Technology, Technology and Research Foundations Section, Committee for the Promotion of Industrial, Academic and Public Cooperation, and Conflict of Interest Working Group, "Conflict of Interest Working Group Report" (November 1, 2002).
- Decision of the Minister of Education, Culture, Sports, Science and Technology, "Guidelines for Management and Audit of Public Research Funds at Research Institutions (Implementation Standards)" (February 15, 2007).
- Tohoku University Research Promotion Council, "Researchers' Manners: With Love for and Pride in Science" (April 2007).
- Tohoku University Rules for the Safety Management of Genetic Recombination Tests (June 9, 1981).
- Tohoku University Rules on Animal Testing and Other Related Matters (May 3, 2007).
- Tohoku University Rules for Managing Chemicals and Other Substances (October 2, 2008).
- Tohoku University Rules for Managing Conflict of Interest (March 27, 2009).
- Tohoku University Rules for Managing Security Trade Control (January 27, 2010).

# **3.** Ban Against Misconduct and Improper Dealing in Research Activities, and Compliance with Laws and Ordinances

The "Draft Code of Conduct for Researchers at Tohoku University: A Handbook for Researchers" and "The European Code of Conduct for Research Integrity" were consulted.

Typical research misconduct is defined as *fabrication* (making up data or results and recording or reporting them), *falsification* (manipulating research materials, equipment, or processes, or intentionally changing or omitting data or records), and *plagiarism* (appropriation of another person's ideas, processes, results, or words without giving appropriate credit), and are commonly referred to as "FFP." Research exploitation is included in plagiarism. However, research misconduct does not include honest error or differences of opinion.

The definition of misconduct ranges from the definition used by institutions like the U.S. National Academy of Sciences that limits misconduct to FFP, to the definition used by guidelines like "The European Code of Conduct for Research Integrity" that includes *failure to meet clear ethical and legal requirements, improper dealing,* and *questionable research practices.* It can be said, nevertheless, that the definition is being expanded incrementally. The Science Council of Japan's "The Current State of Misconduct and Measures to Combat It: Toward an Autonomous Community of Scientists" (July 21, 2005) uses the word "misconduct" to include and bring into question "other practices that seriously deviate from those that are commonly accepted" that are not covered under conventional FFP.

Conversely, grouping together all deviations and improper dealings as "misconduct" would lead to misconduct being equated to illegal activities. This Code of Conduct, therefore, defines such actions according to three categories, and sets out clear measures to address wrongful research practices, including investigation.

Authorship (author credit in a paper) has frequently been raised as a problem. The International Committee of Medical Journal Editors' (ICMJE) "Uniform Requirements for Manuscripts Submitted to Biomedical Journals" (established in 1985, updated in 2010) has been shared broadly across various disciplines. The said Requirements define "author" as someone who satisfies all of the following three conditions: (1) has made substantial contributions to conception and design, acquisition of data, or analysis and interpretation of data; (2) has drafted the article or revised it critically for important intellectual content; and (3) has given final approval of the version to be published.

#### (References)

• Report by the Standing Committee on Science and Society, Science Council of Japan, "The Current State of Misconduct and Measures to Combat It: Toward an Autonomous Community of Scientists" (July 21, 2005).

- Council for Science and Technology and Special Committee on Scientific Misconduct, "Guideline for Countermeasures against Misconduct in Research Activities: Special Committee on Scientific Misconduct Report" (August 8, 2006).
- Tohoku University Research Promotion Council and Research Ethics Expert Committee, "Guidelines for Measures against Misconduct in Research Activities" (March 1, 2007).
- Tohoku University Research Promotion Council, "Researchers' Manners: With Love for and Pride in Science" (April 2007).
- "Guidelines for the Proper Operation and Management of Research Funds at Tohoku University" (October 26, 2007).
- Tohoku University Board of Directors, "Guidelines for Measures against the Misuse of Research Funds" (January 30, 2008).

#### 4. Maintenance and Enhancement of Research Ethics

The Code of Conduct notes the importance of maintaining research ethics, and makes clear that both researchers and the university have this responsibility. The global trend in preventing misconduct has been ensuring the practice of ethical standards through education and awareness-raising. The Science Council of Japan's "Statement: Code of Conduct for Scientists – Revised Version –" has newly added that scientists "shall work continuously...toward educational enlightenment preventing misconduct." As a research university that fosters researchers, research ethics is an area to which Tohoku University must attach exceptional importance.

### (References)

- Science Council of Japan, "Statement: Code of Conduct for Scientists Revised Version –" (January 23, 2013).
- Tohoku University Research Promotion Council, "Researchers' Manners: With Love for and Pride in Science" (April 2007).

Note:

- (1) To ensure that this Code of Conduct is practiced by all faculty, staff, and students, a pamphlet will be created in both Japanese and English and will be disseminated to all concerned parties.
- (2) To promote sufficient understanding of the content and ensure the appropriate implementation of the actions and decision-making related to the Code of Conduct, a guide (textbook) with examples and relevant materials will be prepared, and activities will be carried out to promote the adoption of the Code of Conduct.