

# Translated for Retraction Watch by One Hour Translation

October 11 2017  
Gunma University National University Corporation

## Regarding the results of an inquiry into writings by a professor at the School of Health Sciences

In response to the allegation of suspected misconduct in four papers published by Professor Masashi Emoto from this university's School of Health Sciences, we have conducted both a preliminary investigation as well as this inquiry proper at our university.

As a result, as shown in "3. Survey Results," we declare that specific fraudulent acts (falsification) were identified.

### 1. Overview

The preliminary investigation and this inquiry were carried out after we received an allegation from the representative of an outside party on February 28 2012.

This inquiry was carried out on the basis of verifying statements and documents submitted by Professor Emoto for the 6 locations in 4 items within 4 papers where alleged fraud was purported to exist, questioning Professor Emoto, and the image analysis of data provided by Professor Emoto.

As a result, we identified 12 specific fraudulent acts (falsification) in a total of 8 items including 6 acts in 3 items newly found in image analysis.

### 2. Investigation

#### (1) Subject of the investigation

##### ① Subject of the investigation

Masashi Emoto (Professor at the School of Health Sciences)

##### ② Persons concerned

Three individuals engaged in the experiments at the Max Plank Institute in Germany.

#### (2) Subject papers

##### ① (Title of paper) $\alpha$ -Galactosylceramide Promotes Killing of *Listeria monocytogenes*

within the Macrophage Phagosome through Invariant NKT-Cell Activation

(Publication) *Infection and Immunity* 2010;78(6):2667-76

(Authors) Masashi Emoto, Tomomi Yoshida, Toshio Fukuda, Ikuo Kawamura, Masao Mitsuyama, Eiji Kita, Robert Hurwitz, Stefan H.E.Kaufmann, and Yoshiko Emoto

##### ② (Title of paper) $\alpha$ -GalCer ameliorates listeriosis by accelerating Infiltration of Gr-1 cells into the liver

(Publication) *European Journal of Immunology* 2010;40(5):1328-41

(Authors) Masashi Emoto, Yoshiko Emoto, Izumi Yoshizawa, Eiji Kita, Takamitsu Shimizu, Robert Hurwitz, Volker Brinkmann and Stefan H.E.Kaufmann

##### ③ (Title of paper) Dissociated expression of natural killer 1.1 and T-cell receptor by invariant natural killer T cells after interleukin-12 receptor and T-cell receptor signalling

(Publication) *Immunology* 2009;129(1):62-74

(Authors) Masashi Emoto, Takamitsu Shimizu, Hiromi Koike, Izumi Yoshizawa, Robert Hurwitz, Stefan H.E.Kaufmann and Yoshiko Emoto

##### ④ (Title of paper) Role of interleukin-12 in determining differential kinetics of

invariant natural Killer T cells in response to differential burden of *Listeria monocytogenes*

(Publication) *Microbes and Infection* 2008;10(3):224-32

(Authors) Yoshiko Emoto, Izumi Yoshizawa, Robert Hurwitz, Volker Brinkmann,  
Stefan H.E.Kaufmann, Masashi Emoto

( 3 ) Investigative methodology

The inquiry related to this case was carried out by the following methods:

- Verifying the contents of the statements and evidence materials for 12 locations in 8 items within 4 papers that were the target of the inquiry.
- Questioning the subject of the inquiry
- Image analysis of data for the papers submitted by Prof. Emoto
- Confirmation of hearing results from Maebashi District Court and Tokyo High Court

( 4 ) Investigative organization

Research Code of Conduct Committee

Chairperson Takashi Minegishi (Director/Research Officer)

Committee member Amane Saito (Professor, Faculty of Education)

Yoshinori Toyama (Professor, Faculty of Social Informatics)

Yoshihiko Kominato (Professor, Graduate School of Medical Sciences)

Hirokazu Murakami (Professor, Graduate School of Health Sciences)

Osamu Hanaizumi (Professor, Graduate School of Science and Engineering)

Tetsuro Izumi (Professor, Institute for Molecular and Cellular Regulation)

Shuhei Fujimoto (Outside party with insight on research activities)

Maruyama Kazuki (Outside party with expertise in law)

Naoya Ota (Professor, Graduate School of Science and Engineering)

Izumi Takashi (Professor, Graduate School of Medical Sciences)

3 . Results of inquiry (Content of specific fraudulent acts)

( 1 ) Classification of specific fraudulent acts identified

Falsification

( 2 ) Researcher involved with specific fraudulent acts

- The researcher who has been identified as being responsible for the content of the paper(s) or the like involving specific fraudulent acts.

Masashi Emoto, Professor, Gunma University Graduate School of Medical Sciences

( 3 ) Expenses and research challenges associated with specific fraudulent acts

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※ There is no expenditure of expenses where a direct causal relationship with specific fraudulent acts is identified.

( 4 ) Identified fraudulent contents

Applying image analysis such as contrast enhancement and the creation of differential images to the data for paper submission supplied by Professor Emoto, we have confirmed discontinuous data obtained through cutting and pasting data from electrophoretic imaging as well as dot plot diagram processing.

4 . Conclusion

Professor Emoto possessed raw research data of importance to this investigation but did not submit it, and while confirming the above contents during questioning he insisted that the experiment itself was done by others and

that he was not responsible. Furthermore, he has so far not responded to our recommendation that he withdraw the papers in question.

Professor Emoto must, as the responsible author, grasp all the contents of the theory and experiment results that make up the paper, as well as take responsibility for them, even if he does not carry out the experiments himself. Therefore, while Prof. Emoto was responsible for ensuring that research activities were conducted in accordance with scientifically sound methods and procedures, and for showing with a scientific basis that the paper was also written as an appropriate expression on such a foundation, based on raw data, experimental observation notes, etc., we were unable to submit evidence to prove research fraud beyond a reasonable doubt. For this reason, Professor Emoto is identified as the person responsible for the contents of papers and the like pertaining to research that has been identified as involving fraudulent acts even though he cannot be identified as the one who carried out said acts.

#### 5. Content of measures taken by the investigating body to date

The Education Research Council and the Board of Directors have deliberated on the research misconduct committed by the subject of this inquiry.

Further, in light of their effect on society, we recommended the withdrawal of papers investigated in the course of this inquiry on July 18 2014; however, as this has not been confirmed, we again recommended withdrawal on September 15 2017.

#### 6. Factors causing the specific fraudulent acts and measures to prevent recurrence

##### ( 1 ) Causes

We formulated the Gunma University Scientist Code of Conduct on April 1, 2007, and as persons who study profound scientific principles and their applications, the faculty members of our university have made the decision to engage in daily research activities with the awareness that we have the responsibility to faithfully respond to society's trust and confidence.

To date we have held briefing sessions for faculty and staff on the improvement of researcher ethics and the prevention of fraudulent practices, while also trying to thoroughly inform newly appointed teachers regarding this purpose at the new faculty briefing session; however, it must be said that the act of processing experimental data to create data that does not exist is caused by a lack of recognition regarding the code of conduct as a researcher and research ethics.

##### ( 2 ) Measures to prevent recurrence

It is thought that the aforementioned efforts did not produce sufficient effect, and we will take the following measures to further strengthen researcher ethics in the future:

- While we have been holding briefing sessions on the improvement of researcher ethics and prevention of misconduct since September 2014, we will be providing faculty members and students with warning letters in order to prevent the recurrence of fraudulent acts in research activities and to thoroughly prevent misconduct. In addition, we encourage teachers to reexamine related research activities, and if there is a problem, instruct them to respond promptly through measures such as corrections.
- We will actively encourage those who have not attended briefing sessions on the improvement of researcher ethics and prevention of misconduct to partake either online or through DVDs, and to raise awareness among faculty. In addition, we will not allocate basic research funds for those faculty members who have not attended these sessions until their participation can be confirmed.
- Regarding materials such as experiment notes for research papers that publish research results and research samples, etc., while thus far conventions have been adopted obliging each department to hold them for a certain period of time for disclosure as necessary, the operational status will be confirmed once a year.
- Incorporate research ethics education into undergraduate and graduate school compulsory courses and promote understanding from an early stage.