



Editorial: the 100th Anniversary of the TJEM

A Message for Young Authors: The Past 100 Years and Future of the Tohoku Journal of Experimental Medicine

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Tohoku J. Exp. Med., 2020 January, 250 (1), 1-3.

In the first Issue of the year 2020, we are pleased to announce the 100th Anniversary of the Tohoku Journal of Experimental Medicine (TJEM). As mentioned in the previous editorials (Shibahara 2009, 2010; Takahashi and Shibahara 2019), TJEM was founded in 1920 by professors of Tohoku Imperial University, Medical School; Toshihiro Fujita, Toyoziro Kato and Yasutaro Satake (Table 1). The first Issue of the TJEM was published on April 29, 1920 (<http://www.journal.med.tohoku.ac.jp/firstpaper.html>). The TJEM has been published continuously from April 1920 to today, except for the year of 1946 just after the World War II.

The Great East-Japan Earthquake (magnitude 9.0) attacked the Tohoku region (northeastern Japan), which included Sendai City, on March 11, 2011 (Shibahara 2011). However, the Issues of the TJEM have been continuously published without delay in spite of the damages by The Great East-Japan Earthquake with a devastating tsunami and the Fukushima Nuclear Accident. Since then, disaster-prevention science and earthquake/tsunami research, including earthquake archeology, are the important fields of the TJEM (Shibahara 2012; Ishigaki et al. 2013).

We would like to thank all the authors, the readers and the reviewers who contributed to the TJEM in the past 100 years. The TJEM published 10,577 papers in the 100 years from 1920 to 2019. The successful relation between the authors and the readers of the TJEM results in high citations of the articles published in the TJEM. The Web of Science (Clarivate Analytics, Philadelphia, PA) contains the database of the TJEM consisting of 7,477 publications since the Volume 73, Issue 2 in 1961, with total 58,683 citations at the present moment (January 1, 2020). Table 2 shows the top 3 articles of the TJEM which have been most frequently cited since 1961.

The top of the most frequently cited articles is the study on morphine glucuronides by Shimomura et al. (1971) from the Department of Pharmacology, Faculty of Pharmaceutical Sciences, Kyushu University. They demonstrated an analgesic effect of morphine-6-glucuronide, which was more potent than morphine. The second is the article on histometrical studies of human arteries by Furuyama (1962) from the Departments of Medicine and Pathology, Tohoku University School of Medicine. This article was written for the doctoral thesis of Michiko Furuyama, who was a graduate student in the Department of Pathology directed by Prof. Norio Suwa, one of the Chief Editors of the TJEM (Table 1). The third is the report on the establishment of the rat model of type 2 diabetes mellitus, Goto-Kakizaki rats, by Goto et al. (1976) from the Third Department of Internal Medicine, Hirosaki University School of Medicine. The Goto-Kakizaki rat is a genetic non-overweight type 2 diabetes model generated by repeated inbreeding of Wistar rats with glucose intolerance, starting from a non-diabetic Wistar rat colony. Goto-Kakizaki rats exhibit certain diabetic complications such as nephropathy and retinopathy, and are now widely used in the basic studies on type 2 diabetes mellitus all over the world. Prof. Yoshio Goto moved from Hirosaki University to Tohoku University as the Professor and Chairman of the Third Department of Internal Medicine in 1976. It should be noted that all three articles are still cited, and the number of citations is increasing continuously. In particular, the article on Goto-Kakizaki rats by Goto et al. (1976) was cited 12 times in 2019. The lists of the most frequently cited TJEM papers are found at <http://www.journal.med.tohoku.ac.jp/top30/top30.html>.

We then thank all the previous Editors, the Editorial Board Members and the Editorial Staffs for their sincere

Published online January 24, 2020; doi: 10.1620/tjem.250.1.

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Table 1. Chief Editors in the 100 years of the Tohoku Journal of Experimental Medicine (TJEM).

Name	Area of expertise	Incumbency
Toshihiko Fujita*	Physiology	1920 ~ 1939
Toyoziro Kato*	Internal Medicine	1920 ~ 1944
Yasutaro Satake*	Physiology	1920 ~ 1958
Hajime Masamune	Medical Chemistry	1944 ~ 1958
Koichi Motokawa	Physiology	1944 ~ 1965
Toyoziro Kato	Internal Medicine	1949 ~ 1965
Masao Wada	Physiology	1958 ~ 1973
Masao Arakawa	Pediatrics	1965 ~ 1977
Norio Suwa	Pathology	1965 ~ 1977
Suguru Akaishi	Forensic Medicine	1967 ~ 1980
Goro Kikuchi	Medical Chemistry	1969 ~ 1981
Makoto Seiji	Dermatology	1970 ~ 1980
Takeshi Hoshi	Physiology	1973 ~ 1977
Toshiyuki Yamamoto	Anatomy	1973 ~ 1980
Makoto Endo	Pharmacology	1977 ~ 1980
Kaoru Yoshinaga	Internal Medicine	1977 ~ 1980
Masayuki Ikeda	Hygieneology	1978 ~ 1980
Keiya Tada	Pediatrics	1980 ~ 1981
Norio Taira	Pharmacology	1980 ~ 1990
Toshiyuki Yamamoto	Anatomy	1981 ~ 1983
Norio Hayashi	Medical Chemistry	1991 ~ 1992
Norio Taira	Pharmacology	1993 ~ 1994
Hiroshi Satoh	Hygieneology	1994 ~ 2003
Shigeki Shibahara	Physiology	2003 ~ Present

*Founding Editors of the TJEM.

Table 2. The top 3 articles in the TJEM which have been most frequently cited since 1961.

Citations**	Author(s)	Year	Title	Vol.	Pages
339	Shimomura et al.	1971	Analgesic effect of morphine glucuronides.	105	45-52
264	Furuyama	1962	Histometrical investigations of arteries in reference to arterial hypertension.	76	388-414
260	Goto et al.	1976	Production of spontaneous diabetic rats by repetition of selective breeding.	119	85-90

**The number of citations is following the analysis of the WEB of Science (Clarivate Analytics, Philadelphia, PA) on January 1, 2020.

contributions to the TJEM in the 100 years. Twenty-one professors in Tohoku University School of Medicine served as Chief Editors of the TJEM during the 100 years, as listed in Table 1. In addition to the editorial work in the TJEM, they had to play central roles in the research, education and management of Tohoku University. Among them, four Chief Editors served as the President of the University after the mission of the TJEM: Prof. Yasutaro Satake (the President of Tohoku University, 1946-1949), Prof. Koichi Motokawa (the President of Tohoku University, 1965-1971), Prof. Goro Kikuchi (the President of Nippon Medical School, 1986-1992) and Prof. Takeshi Hoshi (the President of the University of Shizuoka, 1993-1999).

Morio Kita (Dr. Sokichi Saito, 1927-2011), one of the alumni of Tohoku University School of Medicine and a famous novelist and essayist, wrote on his memory of the examination of physiology by Prof. Koichi Motokawa in his essay, 'Doctor Manbo Seishun-Ki (Essay on the days of youth)'. Morio Kita had to take examinations of physiology by Prof. Motokawa 4 times repeatedly until he passed, probably because his study in physiology was not enough. Nevertheless, Morio Kita respected and liked Prof. Motokawa, because he was a man of good morals and humor who was able to teach and foster medical students.

Now, the present Editors of the TJEM may sometimes have to request authors to do manuscript revisions more

than 4 times before publication in the TJEM, like the examination of physiology by Prof. Motokawa. This is partly because we would like to publish articles of better quality in the TJEM, and partly because we hope to help young authors to become established medical scientists through the publication of their articles in the TJEM. As shown in the Guidelines of Authors of the TJEM (<http://www.journal.med.tohoku.ac.jp/Guidelines/index.html>), our mission is to publish peer-reviewed papers in all branches of medical sciences including basic medicine, social medicine, clinical medicine, nursing sciences and disaster-prevention science, and to present new information of exceptional novelty, importance and interest to a broad readership of the TJEM. However, another important mission of the TJEM Editors has been, and will be to educate and foster young authors to established medical scientists who contribute to the advance of medical science and the happiness of mankind.

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