

## CONTRIBUTIONS TO GERMAN-JAPANESE MEDICAL RELATIONS

### PART II

Alexander Kast\*

## ERWIN BÄLZ: , PROFESSOR OF INTERNAL MEDICINE IN TOKYO – 1876-1905

### SUMMARY

*The most important among the German pioneers of the Meiji period (1868-1912) is Erwin Bälz (1849-1913), who graduated in internal medicine and received habilitation from Leipzig University. He arrived in Tokyo in 1876 and taught at Tokyo University for 26 years. Beside his field of expertise, his courses included physiology, pharmacology, pathology, gynaecology and psychiatry. Among numerous publications, those about hygiene and Beriberi prophylaxis are the most prominent. In 1905, he was the last German university teacher to leave Japan.*

**Keywords:** history of medicine, 19<sup>th</sup> century; physicians, medical education, Germany, Japan.

Erwin Otto Bälz was born in Bietigheim, Schwaben on 13 January 1849 (Fig. 1). After graduating from a gymnasium in Stuttgart, he took a study of medicine in Tübingen and Leipzig in 1866. During the Franco-Prussian War of 1870/71, he served as a Württembergian junior medical

---

\* Head Institute of Exp. Pathology/Nippon Boehringer Ingelheim Co. Ltd. in Kawanishi, Japan (1968-88), Priv. Doz. Univ. Gießen, Hessen (1989-93).

Adresse: Priv. Doz. Dr. Alexander Kast, Dr. Gebauer Str. 33, D-55411-Bingen am Rhein, E-mail: PDDRAKAST@t-online.de



Figure 1 Bälz's birthplace in Bietigheim (1994)

officer (Unterfeldarzt). In 1876, he received a *venia legendi* (habilitation) in internal medicine in Leipzig. There he successfully treated a Japanese patient. Shortly thereafter, he received an invitation to teach as a full professor at the Medical Academy of Tokyo, which became Medical School of the Royal University in 1886.

#### ASSUMING THE TEACHING POSITION IN TOKYO

In April 1876 (Meiji 9), Bälz took a train to Naples, then boarded a ship to Alexandria, continued with a train to Suez and finally reached Yokohama by sea via Hongkong on a rainy night of the 6<sup>th</sup> day of June. He moved into one of the 17 residences for foreign teachers in the Ueno Park and took up teaching on 10 June (Fig. 2). Mornings would usually begin with exercises in diagnostics at the outpatient clinic. Then he would give lectures in special pathology, psychiatry, toxicology, obstetrics (Fig. 3) and gynaecology. At the time, Japanese medical students were already able to



*Figure 2 Erwin Bälz, 1876 (by courtesy of the City Archive of Bietigheim)*

follow lessons in German. In the afternoon, Bälz would work in his private hospital. Among his patients there were many high-ranking government officials and diplomats. Because of his high reputation as a medical doctor, Bälz was finally appointed physician in ordinary to the Royal Family in 1890. At the 1905 New Year dinner, Bälz was the only foreigner to sit at the Royal table, save for a few ambassadors. However, not even his high repute spared him the treatment of a second-class citizen by his conservative Japanese hosts. Only when he indignantly offered his resignation on 18 April 1900 was he invited to return to faculty sessions.

### SCIENTIFIC PAPERS

In 1928, Schottländer compiled 64 papers written by Bälz, 33 among which were related to medicine and 20 to anthropology and ethnology. In 1882/83, Bälz described the physical properties of the Japanese in an anthropological study. He was particularly interested in pure vegetarian diet which enabled a kuli to draw his riksha 110 km uphill from Tokyo to



Figure 3 The development of the foetus, months 4-8 (wood block print, 1880)

Nikko in 14 hours (Fig. 4). In 1886, the Japanese counted 38 million people, of whom two million were the samurai and 3400 nobles (Daimyo families). There were only 2000 contracted Europeans living in the harbours of Nagasaki, Kobe, Yokohama and in Tokyo.

At the time, many diseases were endemic in the country and attracted Bälz's attention, as follows:

1. Japanese river fever (tsutsugamushi, a Filariasis transmitted by insects) was first scientifically investigated by Bälz in 1879.
2. Pulmonary distomiasis was observed and described by Bälz as soon as 1880 (the Eastasian lung fluke makes twice a change of host in fresh water and is then taken up by humans through crude crab meat)
3. Japanese national disease Beriberi. From 1881 through 1911 Bälz repeatedly published his observations about the disease. It gradually disappeared during his term of office between 1878 and 1891 because of the introduction of European food for the marines. However, in the



Russian-Japanese War of 1904/05 the high morbidity of 40,000 soldiers is mainly related to Beriberi. The cause of the disease, namely vitamin B1 deficiency due to diet based on polished rice was not discovered before 1910 by Umetaro Suzuki.

4. Leprosy. From 1882 through 1900 Bälz published numerous teaching articles about this disease.
5. Cholera. In 1882, during an epidemic in Tokyo, Bälz supervised the quarantine hospital. Later on he wrote a memorandum “on the avoidance of epidemic diseases” with practical proposals for general improvement of hygiene.
6. Tuberculosis also spread among his nobleman patients. Within the frame of prophylaxis, Bälz taught physical training as the means to prevent the spreading of the epidemic.

It is interesting to learn that Bälz introduced courses in Japanese history for his students and encouraged physical exercise and sports. As soon as 1880 he established a medical curriculum for women in Tokyo. In Germany women were not allowed to study medicine before 1899. He



Figure 4 Bälz (standing) during an excursion (by courtesy of the City Archive of Bietigheim)



Figure 5 Bälz's memorial stone in Bietigheim, the inscription is by his student T. Irisawa



was especially interested in Japanese hot springs whose therapeutic properties he soon recognised (several contributions 1884-1909). Although he could not implement his ideas, hot spring resort of Kusatsu, well known for its sulphur spring, acknowledged his contribution with a memorial stone erected in 1935. Since 1962, a duplicate has been set up in the Japanese garden of his hometown Bietigheim, as a gift of the partner-town Kusatsu (Fig. 5).

### MARRIAGE TO A JAPANESE

Bälz was talented and eager to learn Japanese. In 1888, he married Hatsu (Hana) Arai (Fig. 6, born on 18 Nov. 1864). In 1889, their son Erwin Toku was born, and in 1893 their daughter Uta, who died of peritonitis at the age of three. His mother-in-law and the adopted 12-year-old daughter Gin also died of peritonitis. Bälz suffered a lot for not being able to help them. In 1900, Toku went to Germany for further education. In 1915, he married Helene Zeman during a leave from the front, with whom he had a daughter



*Figure 6 Hana Bälz*



*Figure 7 Erwin von Bälz, 1905 (by courtesy of the City Archive of Bietigheim)*

Gerhilt and four sons (Hatto, Kuno, Dietz & Götz). The three youngest sons were killed in action in WW2. Toku studied architecture and devoted himself to cultural exchange between Germany and Japan. He died in 1945 in the Tokyo University hospital, just 50 m away from his birthplace.

#### **“HOME LEAVE”**

During his stay in Japan, Bälz took home leave on three occasions, every time for one year. In 1885, he gave a lecture at a congress of anthropology in Karlsruhe; in 1892 he spoke about Japanese hot springs at the 12<sup>th</sup> Congress of Internal Medicine in Stuttgart, and in 1900, he gave a report about East Asian races including the Ainu at a congress of anthropology in Berlin. In 1902, Bälz definitively retired. Now, he devoted even more time to anthropology. He described the Mongolian spot. During the Russian-Japanese War he became government adviser for catering and hygiene of the troops and the establishment of military hospitals.



## HONOURABLE DISMISSAL IN JAPAN

In June 1905, Crown Prince Yoshihito (later Taisho-Tenno) gave a sayonara party for Bälz (Fig. 7). At a dismissal hearing, the Meiji-Tenno awarded him with the “Grand Cross of the Order of the Rising Sun” with a grant document in German. Fourteen days later, Mrs and Mr Bälz crossed the Tsushima Strait on board of the steamer Ziethen in calm sea. Upon his return to Germany, Bälz received a title of nobility from the King of Württemberg and became the president of a newly founded society for tropical medicine. In 1907 (Meiji 40), his Japanese students set up a memorial monument for Erwin von Bälz and surgeon Julius Scriba (1881-1905 in Tokyo) at their university campus (Fig. 8). In 1908, on the occasion of his last journey to Japan, he founded the Bälz Foundation with the starting capital of 30.000 German Reichsmarks for work in the field of physical therapy. The capital of the foundation however was lost to WW1. Erwin von Bälz died on 31 August 1913 in Stuttgart after having suffered



Figure 8 The Erwin Bälz and Julius Scriba Memorial at Tokyo University campus  
(by courtesy of the City Archive of Bietigheim)

from an aneurysm of the aorta for four years. In 1922, his widow Hana returned to Tokyo where she died of gastric cancer on 7 February 1937.

### “ERWIN VON BÄLZ-PREIS”

In 1964, the pharmaceutical company Nippon Boehringer Ingelheim established a new Prize “Erwin von Bälz-Preis” in Tokyo to deepen cooperation between Japan and Germany. As stated in the rules for application, the standing prize committee of five members invites young Japanese scientists from all fields of medicine to apply for the prize. Every year, the committee supported by reviewers evaluates the applicants' papers and awards papers which excel in some way. Except for 1983, when none of the nine contributions was found relevant, a total of 83 papers, mainly from university institutes, was awarded by the year 2003. Among them, 38 won the first prize (now Yen 6 million, or about Eur 46,000 according to the exchange rate of 30 Dec. 2003) and 37 the second prize (Yen 3 million). Nine papers received the “Fine Art Prize” (Yen 1.5 million) and 7 the “Memorial Prize” (Yen 3 million). In November 2003, the first prize was awarded to Taro Shirakawa from Kyoto University for his paper on allergic disorders. The Bälz Prize is the oldest medical award in Japan, celebrating its 40<sup>th</sup> anniversary.

### LITERATURE

1. Ishibashi C (1981) Bälz, Kusatsu und Suoshi. DMW Japan Ltd., Tokyo
2. Kajima U (1978) Hana Bälz. Deutsche Verlagsanstalt, Stuttgart
3. Kast A (2000) Erwin Bälz. Japan Magazin 11, (3) 25-27
4. Schottländer E (1928) Erwin von Bälz, Heimat Verlag, Stuttgart
5. Without author (2004) Baelz Prize. [www.boehringer-ingelheim.co.jp/baelz/record-e.html](http://www.boehringer-ingelheim.co.jp/baelz/record-e.html)