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80 Years of the Medicine and Tropical Hygiene Center in Gdynia (1937–2017): The Pioneer Pre-War Years 1937–1939

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The present Interdepartmental Institute of Maritime and Tropical Medicine in Gdynia of the Medical University of Gdańsk was formally established in 1939 by the Order of June 5, 1939, of the Minister of Social Welfare, Marian Zyndram-Kościałkowski. However, the Branch of the National Institute of Hygiene in Gdynia was founded 2 years earlier, in 1937 (the first head was Dr. Med. Jerzy Jakóbkiewicz [1892–1953]), and its fruitful activity was ennobled 2 years later by increasing its rank and adding the name “Marine and Tropical Hygiene Institute”. These facts are very little known, and therefore worth presenting in the jubilee years of the 80th anniversary of the institution.

MeSH Keywords: **Epidemiology • History of Medicine • Military Hygiene • Tropical Medicine**

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It is generally accepted that the present Interdepartmental Institute of Maritime and Tropical Medicine in Gdynia of the Medical University of Gdańsk was established in 1939. Indeed, by virtue of the Order of June 5, 1939, of the Minister of Social Welfare, Marian Zyndram-Kościałkowski published in the Journal of the Ministry of Social Welfare, No. 12 of June 15, 1939 (Figure 1), an institution named “Institute of Marine and Tropical Hygiene, Branch of the National Institute of Hygiene in Gdynia” was officially opened on June 28, 1939 (Sea Day). However, one should pay attention to the full name of the center as the NIH Branch. The Branch of the National Institute of Hygiene in Gdynia was founded 2 years earlier, in 1937 (the first head was Dr. Med. **Jerzy Jakóbkiewicz [1892–1953]**), and its fruitful activity was ennobled 2 years later by increasing its rank and adding the name “Marine and Tropical Hygiene Institute”. These facts are very little known, and therefore worth presenting in the jubilee years of the 80th anniversary of the institution. Not only do they “extend” the duration of the institution, but also explain the genesis of its creation and the importance of its tradition.

The appointment of Dr. Jakóbkiewicz as the head of the NIH Branch in Gdynia was an extremely good decision, due to his exceptional expertise and experience in epidemiology and microbiology, but also due to his unprecedented energy and integrity of character. Dr. Med. **Józef Jakóbkiewicz** (Figure 2) (1892–1953) was one of the foremost figures in Polish medicine [1–3]. The son of a Polish exile, Sybirak, was born in Perm and he graduated from the medical school in Moscow. In 1918, as a young doctor, but with 3 years of wartime experience

Figure 2. Dr. Med. Józef Jakóbkiewicz.

on the front, he arrived at Vladivostok and was appointed as a chief sanitary doctor. He worked among many Poles working in the distant Far Eastern borderlands of the Russian Empire, across the Pacific, near the border with China (Manchuria, Nadamurskie Country).

The third pandemic of plague began in 1894 in the province of Junan in China. An anonymous ‘Sybirak’ wrote in 1922 in the pages of the biweekly ‘Echo of the Far East’, which comes out in 3 languages (Polish, English and Japanese), about the urgent need for evacuation of Poles from Manchuria and Amur Country: “Among plunder, terror, hunger, typhus, plague, cholera and other plagues, which usually prowl where there is disorder, lawlessness, chaos, and war conflagration, the Polish population in the Far East is fighting not only for economic existence, but also for life (...). And all Poles are dreaming of one, by fate here thrown, or at least the majority of them, has only one goal: return to Poland” [4]. The effectiveness of this evacuation to distant Poland was to a large extent attributable to the actions of Dr. Jakóbkiewicz [1,5–7].

Jakóbkiewicz was, in the discussed period, a leading European expert on the plague [8–13], as well as several other Polish doctors and scholars who returned to the country with great experience in prevention, diagnosis, treatment and eradication of this disease, such as Dr. Józef Batko (1869–1948), Dr. Wincenty Bogucki (1871–1929), Prof. Dr. Fil. and Med. Szymon Leonard Dzierżgowski (1866–1928), **Dr. Józef Grabowski (1861–?)**, **Dr. Władysław Hłasek (1869–1923)**, Dr. Ludwik (?) Kulesza, Dr. Tadeusz Nowkuński (1861–1931), Prof. Dr. Med.

Figure 1. The act of establishing the Institute of Marine and Tropical Hygiene – June 5, 1939.

Leon Padlewski (1870–1943), Gen. Bryg. WP Prof. Dr. Med. Jan Antoni Rapczewski (1855–1939), Dr. Julian Talko-Hryncewicz (1850–1936), Dr. Aleksander Wasilewski, and the researcher of the plague germs and the victim of this disease, Dr. Władysław Wyżnikiewicz-Turczynowicz (1865–1904) [14]. After Poland regained its independence, almost all of these outstanding Polish doctors with extensive experience in all aspects of diagnostics, epidemiology, treatment, and eradication of plague, gained in the fight against plague in its most dangerous epidemic in Far East Asia, returned to Poland. Dr. Med. Józef Batko (1869–1948) was the first to arrive at the newly created port in Gdynia¹ in 1924. His services for the sanitary protection of the port and the city of Gdynia are difficult to overestimate. He was a world-class specialist; as a longtime port doctor in Suez, he combated many diseases, including plague, and he supervised sanitary and epidemic problems at the Suez Canal. He passed on his great experience in Poland [15], later working in the NIH Branch and the Institute. At the same time, fleet doctors were returning, who were specialists in diving and hyperbaric medicine: Gen. Bryg. Eugeniusz Ciastoń (1861–1930); Płk. Dr. Med. Marian Gąsiorowski (1878–?), płk Dr. med. Aleksander Huszcza (1875–1959), kmdr Dr. med. Florian Hłasko (1865–1922), kmdr Dr. med. Tadeusz Moszczeński (1889–1940) and others.

The decisive influence on the appointment of doctor Jakóbkiewicz probably had Płk. Prof. Dr. Hab. Med. Gustaw Adolf Szulc (1884–1941), military hygienist and epidemiologist (among others, author of works about plague), from 1932 the director of the NIH, who well acquainted with the advantages of Dr. Jakóbkiewicz during his work at NIH after returning to Poland [16–19].

The newly established NIH branch was located on the first floor of the building on the corner of Portowa St. and St. Wojciech St. Already in 1937, shortly after launch, the NIH Branch in Gdańsk developed a very active activity, mainly for Gdynia, all ports and the then maritime district. The first food research was launched because the Municipal Food Research Institute was immediately incorporated into the Branch. Cooperation and substantive supervision of the Port Sanitary Warehouse of the city of Gdynia started immediately. In July 1937, the Bacteriology Department was launched (Figure 3), which **Dr. Tadeusz Przyborowski (1911–1973)** operated. In 1937, 7103 tests were carried out, both food and microbiological, including 1677 from clinical material. These were, for example, both malaria-related studies and the examination of typhoid and paratyphoid fever carriers among the employees of fish processing companies, and performing the Wasserman

Figure 3. Employees of the Bacteriology Department – 1938 (collection of Dr. Iwona Felczak-Korzybska).

Figure 4. The headquarters of NIH in Gdynia and Institute of Medicine and Tropical Hygiene – from May 2, 1938: Gdynia, ul. Starowiejska 50.

reaction at the venereal clinic in Gdynia for sailors. In the first half of 1938, 8842 microbiological tests were carried out. Soon, it turned out that a new place is needed, more spacious and better suited to extensive tasks and a large staff. Dr. Jakóbkiewicz wrote: *“In order to quickly implement the necessary plans, the Branch of the National Institute of Hygiene came into agreement with the Government Commission of the city of Gdynia. With the active participation of **Mgr. Franciszek Sokół**, the Government Commissioner, and his outstanding support, the place was created at a cost of around 30,000 PLN for NIH at 50 Starowiejska Street in Gdynia. If it were not for the quick and energetic financial and organizational help of the Commissariat of the government, it would take a few years for the Institute to obtain rooms so well adapted to the needs and requirements in which it currently works.”*² The ceremonial consecration of the premises took place on May 2, 1938. Designed in a modernist style of Gdynia, a 4-story tenement (Figure 4) became

¹ The first seagoing vessel, s/s “Kentucky” entered the port on August 13, 1923. In 1936, the port of Gdynia served over 40,000 passengers and reloaded over 7 million tons of cargo.

² Franciszek Stanisław Sokół (1890–1956), Commissar of the Polish Government in Gdynia in 1933–1939, was an important advocate of health care in Gdynia, and advocated the establishment of both the NIH Branch in 1937 and the Institute in 1939. See also [20] (author’s note).

Figure 5. Employees of the NIH Branch in Gdynia. First course in helminthology - September 1938. Seated: Dr. J. Jakóbkiewicz (third from the left) and next to Dr. Mikołaj Janicki (third from the right) (collection of Dr. Iwona Felczak-Korzybska).

the headquarters of the branch and then the Institute from 1939 until the outbreak of war. To this day, it is the seat of the Provincial Sanitary and Epidemiological Station in Gdynia.

In 1938, the NIH Branch in Gdynia employed 157 employees (including 11 people with higher education and 8 people with lower education, as well as auxiliary staff). The branch's professional library, which was established thanks to cooperation with the Department of Health Service of the Polish Army and the Maritime and Colonial League, had initially 488 books and 819 brochures, magazines and other publications in 1938, and it was growing quickly. The number of laboratory tests performed increased by almost 4-fold compared to the previous year, to 26 517 tests. The surveys and food examinations were carried out, Dr. Brodniewicz developed the optimal composition of first aid kits on the ships of the Polish Merchant Navy and supervision over them, and in 1938 he published 2 manuals: "Marine first aid kit" and "Issues of a naval physician in the Polish Merchant Marine" [21,22]. In this way he cooperated with a leading expert on the issues of military marine medicine, author of the handbook "Service hygiene on the ship" issued in 1937 [23] and resumed after the war [24], Kpt. Dr. Med. Augustyn Dolatkowski (1903–1977) commander professor, co-creator of Polish underwater and hyperbaric medicine in the reborn Poland. The need to perform malaria and other

human parasitic diseases diagnostics resulted in the establishment of the Laboratory for Exotic Infections, from which the Parasitological Laboratory was distinguished. Parasitological courses were organized almost immediately (Figure 5). Classes were mainly taught by an excellent team of medical parasitologists from the NIH headquarters in Warsaw [25,26]. The creator, in 1926, and the first head of the NIH Parasitology Department, was Ludwik Anigstein (1891–1975), a physician and graduate of the London School of Subtropical Medicine (1923–1924), associate professor of the University of Warsaw (1929), pioneer in the country, and an outstanding expert on tropical parasitology, who repeatedly went to tropical countries as the official representative of Poland [27]. In connection with his next trip, in 1939 Doc. Dr. Hab. Med. Mikołaj Janicki (1895–1955) became the head of the NIH Parasitology Department in Warsaw. He became the main creator and head of courses at the branch of Gdynia. In 1939, with the establishment of the Institute in Gdynia, Janicki was appointed as the head of the Parasitological Laboratory, which was the foundation of the planned Parasitology Department [2,3,28].

Until the outbreak of the war, there was an understandable cooperation with the Health Service of the Polish Army, and especially the Polish Navy, for which valuable publications were written [29,30]. Let us mention here only the leading experts in

tropical medicine in the person of Płk. Dr. Med. Jerzy W. Babecki (1890–1980) [31] and Kpt. Dr. Med. Aleksander Freyda (1897–1940), who died in Katyń.

The institution brought together young and avid graduates of medicine. “For tropical studies in Hamburg” young doctors were sent, including **Mieczysław Bilek (1907–1970)**, **Aleksander Brodniewicz (1904–1973)**, and **Henryk Mosing (1910–1999)**. They became later not only some of the most outstanding figures in Polish epidemiology, hygiene, and microbiology, but also exceptional examples of patriotic heroism. Doc. Dr. Hab. Mieczysław Bilek worked in Kraków and dedicated himself, in the most difficult years of war and German occupation, to the sanitary system of the Kraków region and the fight against infectious diseases in this vast area up to Podhale. He became the creator and builder of a large, modern building, and the director of the Provincial Sanitary and Epidemiological Station until the end of his life [32]. Priest Prof. Dr. Med. Henryk Mosing became a famous epidemiologist and rickettsiologist, as well as being the deputy and successor to Prof. Weigl in Lviv [17,33].

Aleksander Brodniewicz (1904–1986) worked in the Branch from its establishment, and after the war he was a docent and head of the Department of Hygiene at the Medical Academy in Poznań and the Academy of Physical Education in Warsaw. His activity focused mainly on the aspects of hygiene and ergonomics of work on ships and training of ships’ doctors [3,21,22]. He was also an excellent practitioner and a specialist in marine and tropical medicine.

The basic tasks of the new branch were the sanitary-epidemiological supervision over the Polish coast, especially the rapidly developing city and port in Gdynia, as well as work in the field of occupational medicine focused on seafarers, fishermen, docker workers, and fish processing workers. The most important matter was the sanitary protection of the port in Gdynia, and thus the protection of the state border against biological threats potentially carried by ships. In those years, when global air transport was only at the beginning of its later expansion, intercontinental shipping was the main cause of the spread of tropical quarantine diseases (according to contemporary nomenclature), such as: smallpox, cholera, plague, yellow fever, rickettsiae typhoid fever transmitted by clothing lice, and relapsing fever, also vectored by lice.

In 1937, one of the major threats to ports was still the world’s third pandemic of plague since its violent explosion in 1894 in China. As a result, especially in the areas of Manchuria, China, Mongolia, India, and the territories of Far Eastern Russia, a rapid, frightening, and large pandemic of the disease spread with

Figure 6. The Quarantine Hospital in Babi Dół, on Kępa Oksywska, directly north of Gdynia (currently: Babie Doły – the northern coastal district of Gdynia). A fragment of the map from the 1930s.

very high mortality for several decades (there was neither effective treatment nor preventive vaccination). The resolutions of the International Sanitary Conventions in 1894, 1912, 1926, and 1934 were devoted to plague prevention issues and its spread on an international scale [34,35].

Jakóbkiewicz, at the end of his life (1953), wrote an extensive chapter, which was in fact a concise monograph, on the plague, in which he perfectly presented its clinical picture. The extract depicting the horror of the epidemic of this disease is as follows: “(...) in some epidemics, a large number of septic cases were observed with extensive bleeds on the skin and mucous membranes (*pestis nigra*), as well as a rapid septic form (*pestis siderans*). The witness of the tragic cases of such an instant form of bubonic plague was the author of this work, who was working in 1920/21 as a sanitary doctor in the city of Vladivostok. The most severe form of bubonic plague is a secondary complication of pulmonary changes; it sometimes causes very quick death (in less than 24 hours)” [35].

At the initiative of the Government Commissioner, and Dr. Józef Batko, in Babi Dół in the seaside gorge north of Oksywie, the construction of a modern infectious hospital with a quarantine center for the crews of ships was started in 1930 (Figure 6), which was completed in 1935³. In September 1939 he fulfilled his task by hospitalizing the wounded in the battles for Kępa Oksywska. Its building still exists today and it houses the command of the Naval Aviation Brigade.

In 1938, the Branch established anti-plague laboratories in the quarantine hospital in Babi Dół. In his report on the Branch’s activities in 1938, Jakóbkiewicz reported that in 5 months

³ This hospital should not be confused with the garrison Marine Hospital in Oksywie created in 1932.

Figure 7. Dr. Jakóbkiewicz's monograph published by the Institute Publisher in 1939.

they examined 150 rats for the carriage of plague; they were (according to the nomenclature used at the time): *Mus Norvegicus*, 59 *Mus Rattus*, and 17 *Mus Alexandrinus* [36,34]. The aftermath of the author's great experience and Gdynia's works on prevention of plague is detailed in the monograph by Jakóbkiewicz: "Epidemiology of plague on the communication routes of Gdynia" (1939) [34] (Figure 7).

In 1938, at the beginning of the official establishment of the Institute, the structure of the institution was as follows [2,37]:

Branches:

- bacteriological,
- water,
- marine and tropical hygiene (with a parasitological workshop),
- occupational hygiene and occupational diseases,
- 2 laboratories for plague research in quarantine, including a rat examination laboratory (hospital in Babi Dół),
- library and hygiene museum (6000 items in 1938).

The highly satisfying experience of the 2-year functioning of the Gdynia's branch of the NIH led, as was shown at the introduction, to the establishment in 1939 of the Institute of Marine and Tropical Hygiene. This momentous act, however, was not an isolated act, but was part of the deeply deliberate actions of a wider dimension [38–40]. It is a little known fact that at the Jagiellonian University in Kraków, in the academic

Figure 8. Prof. Dr. Med. Jerzy Morzycki.

year 1938/1939, the School of Tropical Hygiene and Medicine was established at the Medical Department, as the beginning of a potential department, which led interdisciplinary teaching of the staff and scientific works in the field of tropical countries. The war thwarted this intention; however, in the academic year 1938/1939, a course on Marine and Tropical Hygiene was conducted at the Faculty of Medicine of the Jagiellonian University, which was presented by the most distinguished Polish specialists, such as Ludwik Anigstein, Józef Batko, and Kpt. Dr. Augustyn Dolatkowski [29,40].

Dr. Med. Jerzy Morzycki (1905–1954) (Figure 8) became the director of the newly established Institute and this was, as became recognized later, another very good choice. During his studies at the Faculty of Medicine, he traveled to the French colonies in Africa, and after obtaining a doctor's degree in 1931–1932, he stayed in France, where he completed courses in the field of hygiene and tropical medicine in Marseilles and worked as a doctor on French merchant ships.

The outbreak of the war in September 1939 caused the closure of the Institute and its takeover by the Germans. Conscious of the value of the institution, they made this acquisition in a "civilized" manner, aware of the value of the institution, or perhaps because of the good contacts maintained by its management of sanitation in the Free City of Gdańsk, despite the deterioration of international relations and the growing influence of Nazi ideology. In a unique Photo from September 1939 (Figure 9) we

Figure 9. September 1939, after the occupation of Gdynia by the Germans, Prof. Dr. Gerhardt Wagner became the director of the Institute and professor of hygiene and bacteriology at the Higher Technical School in Gdańsk (in uniform, next to (second from the right) Dr. J. Morzycki) (collection of Dr. Iwona Felczak-Korzybska).

can see Polish staff with outgoing director Morzycki, next to whom Gerhard Wagner (1879–1940) sits in uniform as doctor and law professor, then professor of hygiene and bacteriology at the Higher Technical School in Gdańsk, soon to become (from 1940) the director of the Institute of Hygiene at the German Medical Academy in Gdańsk – Medizinische Akademie Danzig (MAD). This eminent scientist died on April 13, 1945 in the crash of the evacuation ship “Wilhelm Gustloff” in the Baltic Sea [41,37]. Brodniewicz, Dolatkowski, and Morzycki took part in the defense of the Polish Coast. In October 1939, Morzycki succeeded in evacuating in one railway wagon practically all Polish personnel of the Institute to Warsaw. Brodniewicz had to quickly leave Nazi-occupied Gdynia and went to Tarnów, where he was active in the resistance and helped hide Poles, including Prof. Józef Kostrzewski, an outstanding archaeologist. Dr. Tadeusz Przyborowski wrote a beautiful article about participating in the illegal production of typhus vaccine [42].

In September 1946, the then Deputy Minister of Health, Jerzy Morzycki, voluntarily resigned his position to return to the newly-formed Institute, as both its “old” and “new” director. He justified the need for the existence of an institution: “*Many of the issues facing us have no equivalent in other maritime*

countries, where the population has been living by the sea for centuries and has completely adapted to its conditions. History so far has not known the case of transferring in less than 2 years many hundreds of thousands of people from the depths of the continent to the sea, and health issues related to this contemporary migration of nations may contain many surprises and require new methods and careful elaboration. These matters are within the scope of the Institute’s work” [43]. He wrote these words when, as a result of World War II, a destroyed Poland gained several hundred kilometers of the Baltic coast, and hundreds of thousands of Poles, including many forced emigrants from our eastern borderlands, settled in coastal areas or not far from the coast. But it can also be applied to the times when, after regaining independence in 1918, Poland reached the sea after 123 years, and the construction of a modern city and port in Gdynia aroused the unbelievable enthusiasm of the nation, immortalized in literature by Żeromski’s “Wind from the Sea” and Makuszyński’s “Great Gate”.

The post-war reactivation of the Institute and its management by a pre-war director, whose scientific, didactic, and organizational activity made him one of the most outstanding figures in Polish microbiology and epidemiology, allowed the continuity of Polish marine and tropical medicine and appreciation of its importance for the reconstruction of Poland and making it a maritime country. The survivors returned to work, both in

Figure 10. Training of young staff. From the right: Dr. Wanda Błęńska, lek. wet. St. Rutkowski, Mgr Z. Byczkowski, Z. Jankowski (collection of Dr. Iwona Felczak-Korzybska).

the country and returning over time from abroad. Apart from Morzycki, they were: Prof. Wiktor Bincer, Kmdr. Prof. Augustyn Dolatkowski, Prof. Jan Kwoczyński, Priest Prof. Henryk Mosing,

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Conflict of interest

None.

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