Jan Alkiewicz (Figure 1) was born on March 26, 1896, in Osieczna, in the Leszno district, the son of a medical practitioner. His secondary education imbued in him a passion for the ancient culture and an excellent command of Greek and Latin languages.

While attending middle school (gymnasium) in Leszno, he was involved in the conspiracy movement of the Polish youth, actively participating in the secret Tomasz Zan Society. It was the period of the Partitions of Poland and the Prussian occupation of the Wielkopolska Province. When the Wielkopolska Uprising broke out, Alkiewicz joined the insurgents and, being a medical student, he was delegated to the Insurgent Military Hospital in Września. The Wielkopolska Uprising of 1918 was the only successful uprising during the more than 120 years when Poland was deprived of its independence.

The Alkiewicz family originates from Polish Tatars who moved from the Don River area to Poland in the Middle Ages. The progenitor of the Alkiewicz family is a Cossack Muslim emigrant Alikum–Alku–Alko, who arrived in Poland in the beginning of the 16th century. His successors were baptized in the beginning of the 17th century under the name of Alkiewicz and moved to the Wielkopolska region at the end of the 17th century, where in 1840 they were raised to the nobility, bearing Szahawa and Jelita coats of arms.

Stanisław Alkiewicz (1859-1910), Jan’s father, studied medical sciences in Wrocław and in Leipzig, where he was awarded a doctoral diploma in 1884, having defended his thesis, “A Monograph on the Occurrence of Abdominal Cavity Tumour.” Apart from his medical occupation, he actively supported development of Polish free enterprise, acting as chairman of the Polish Industrialists’ Society and director of the People’s Bank. For his patriotic activity he
was imprisoned by the Prussian authority. Tadeusz, one of Jan’s brothers, was also a famous physician and radiologist.

Alkiewicz started medical studies at the Wroclaw University in 1916 and continued in Munich. He was awarded the Diploma of All Medical Sciences at the Poznań University in 1923. Alkiewicz was employed in 1923 as an assistant in the Dermatology Teaching Hospital of the Poznań University, headed at the time by Professor Adam Karwowski. In 1925, Alkiewicz left for Paris to begin a half-year internship in the Paris teaching hospital run by Raymond Sabouraud, an internationally renowned mycologist and dermatologist. The stay in Paris had a tremendous influence on his future scientific interests.

In the period 1928 to 1933, Alkiewicz expanded his knowledge during monthly trainings under the supervision of outstanding dermatologists, including Professor Josef Jadassohn (Wrocław), Oscar Gans (Frankfurt on Main), and Walter Friboes (Berlin). Between 1923 and 1933, he also worked at the Department of Pathological Anatomy of the Poznań University under the supervision of Professor Ludwik Skubiszewski. In the period 1934 to 1939, Alkiewicz headed the histopathology laboratory of the Dermatology Teaching Hospital and the Dermatology Department of the Józef Struś Municipal Hospital in Poznań. He participated in the Ninth International Dermatology Congress in Budapest (Figure 2).

He considered Jadassohn and Gans as his masters in dermatology, and Raymond Sabouraud, a famous French scientist, spurred his interest in mycology. Alkiewicz became interested in nail pathology under the influence of Professor Oskar Gans, who encouraged him to explore the field, unfamiliar at that time. Years later, he became so proficient in the field that Professor Gans himself admitted not knowing professionals in the nail pathology whose competence could be compared with Professor Alkiewicz’s.

In 1939, Alkiewicz and his entire family were displaced from Poznań by German invaders and moved to Warsaw. It was there that he established the first mycologic laboratory and outpatient clinic at the National Institute of Hygiene in 1940.

After the liberation of Poznań in 1945, Alkiewicz reassumed his previously held position as the head of the Dermatology Department of the Municipal Hospital, which he reorganized from scratch after its destruction in the war. Alkiewicz expanded and extensively equipped the mycology laboratory, which produced three master’s degree theses just a few years later, and made the Poznań center the most prominent in Poland.

Fig. 2 Ninth International Dermatology Congress in Budapest in 1935 (Alkiewicz is first from the right in the second row, wearing a hat and bow tie). (From Proceedings of the International Congress of Dermatology, Budapest, Hungary. September 15-21, 1935.)
Numerous research papers published by Professor Alkiewicz, both in Poland and abroad (31 works on mycology and two textbooks: *Grzybie skóry* [Skin mycoses] and *Mikologia lekarska* [Medical mycology]), prompted the Ministry of Health to establish Poland’s first Department of Medical Mycology, based on Józef Struś Municipal Hospital, at the Poznań University Medical School in 1959. The position of the head of the department was entrusted to Professor Alkiewicz. Two researchers qualified as assistant professors, and three were awarded the title of medicine doctor at the department. Professor Jan Alkiewicz died in Poznań on March 25, 1979.¹

**Research output**

The main achievements of Professor Alkiewicz were related to three fields of scientific study, namely histopathology of the nail, mycoses and the compilation of a bibliography of Polish medical literature on the history of dermatology.

**Histopathology of the nail**

Alkiewicz took an interest in nail diseases while working at Professor Karwowski’s Teaching Hospital. In 1934, Alkiewicz was one of the first scientists who broke new ground for onychotillomania disorder. This is the nail equivalent to trichotillomania, and the only possible treatment is psychiatric.⁴

He worked on problems related to normal and pathologic histopathology of nails. Alkiewicz devoted nearly the whole first year of his research work to experiments aimed at developing a successful method of softening nails for subsequent slicing and dyeing in microscopic examinations.⁵ He developed his own methodology for microscopic research that laid the foundations for a new field of dermatology. Alkiewicz’s first works concerned nail histology. After the establishment of basic knowledge, he wrote further works on pathologic signs based on anatomo-pathologic lesions.⁶⁻⁸ One of these works, *Bielactwo paznokci* [Vitiligo of the nails], was accepted as his habilitation thesis in 1937.⁹

Alkiewicz also conducted histopathologic examinations of nails, including cloudy leukonychia,¹⁰ nail psoriasis,¹¹,¹² pathologic nail lesions in internal diseases,¹³ a description of subungual psoriatic papules,¹⁴ nail lesions in Wilson-Brocq disease (exfoliative dermatitis),¹⁵ histopathology of subungual hematoma,¹⁶ onychogryphosis,¹⁷ nail discoloration,¹⁸ and the location of nail primordia in fetal development.¹⁹ Alkiewicz was also one of the first researchers to offer a histopathologic account of transverse nail grooves.²⁰ He went on to describe the results of serial microscopic examinations of nails with senile onychorrhexis,²¹ as well as histopathologic alterations of longitudinal nail grooves.²² In another paper, Alkiewicz presented a detailed discussion of the permanent loss of nails from clinical, histopathologic, and pathogenetic viewpoints.²³

In 1950, Alkiewicz coined the term and described the disease of trachyonychia, a disease that became established in dermatologic literature.²⁴ He described that the surface of the nail was rough and was covered by many small fine scales. The disease might called 20-nail dystrophy when all fingernails and toenails are involved. Although his original contribution to the present knowledge of the disease is well documented,²⁵ it seems to be completely forgotten in some recent articles on the subject.²⁶

In his papers on nail psoriasis, Alkiewicz used his own detailed histologic examinations to propose the first histotopographic classification of nail psoriasis in the history of dermatology.¹¹,¹² His work proved that the traditional division of psoriatic skin lesions into primary and secondary was unfounded. He furthermore demonstrated that the common process for all psoriatic lesions was pathologic paronychia, a process similar to skin parakeratosis.

Alkiewicz proposed a division of nail psoriasis into psoriatic lesions of the nail matrix, nail bed, and the periungual tissue. A consequence of this position was Alkiewicz’s differentiation of nine forms of nail psoriasis. Alkiewicz demonstrated that the different clinical picture of nail psoriasis is a result of the severity of the disease process, its duration, and localization, which had not been adequately realized until then. To sum up, the pioneering value of Alkiewicz’s work was in his application of histologic factors in the classification of nail psoriasis.¹¹,¹²

A summary of Alkiewicz’s 30 years’ research work on nail histopathology was his monographic review of nail pathomorphology, the first monograph of this type in international literature. The great value of this publication was further recognized when it was published in Jodassohn’s *Handbuch der Haut und Geschlechtskrankenheiten* in 1964.

**Research into mycoses**

In 1946, Alkiewicz published his “Technika badań morfologicznych i biochemicznych drożdżowców chorobotwórczych” [Technique of morphological and biochemical studies of pathogenic yeast fungi], in which he used his own research to assess the suitability of different mycologic laboratory examinations.²⁷ In his further papers, he described a range of new clinical signs and symptoms, such as “a sign of transverse white net” visible under a magnifying glass, as a phenomenon specific for onychomycosis.²⁸ The symptom was particularly pronounced in nail trichophytesis and less commonly in nail favus. The condition consists of the formation of transverse splits in the nail plate resulting from the growth of mycelial threads and their consequent filling with the growing fungus.²⁸

Alkiewicz’s research into laboratory methods of preservation and storage of pathogenic fungi had a great practical value. Together with his colleagues, Alkiewicz developed a unique method that enabled long storage of
cultures of pathogenic fungi in frozen conditions, dried, and in reduced pressure.29 Further improvements of the technique of mycologic examinations enabled Alkiewicz to isolate some rare varieties of pathogenic fungi, such as *Microsporum ferrugineum*, and a description of typical features of nail blastomycosis.30,31 An original contribution to the improvement of methods of studying the pathogenic material was the technique of culturing certain yeast-like fungi in nail blastomycosis described by Alkiewicz.30,31 The method enabled a more regular establishment of the etiologic background of nail diseases in comparison with regular mycologic examinations.

In 1951, Alkiewicz characterized the clinical picture of *Acauliosis ungium*.32 In the 1950s, Alkiewicz conducted a range of interesting experiments concerning the variability of pathogenic fungi and proved that metabolites displaying antibiotic properties can affect the variability of pathogenic fungi.33-37 For example, he demonstrated considerable morphologic alterations of trichophyton under the influence of metabolites produced by a simultaneously growing fungi *Microsporum audouini*.34 A similar effect on the *Aspergillus fumigatus* mold, trichophyton, and microsporon was identified in *Pseudomonas aeruginosa*.35

In his future works, Alkiewicz found that alkaloids of greater celandine (*Chelidonium maius*), such as berberine, chelidonine, papaverine, and sanguinarine failed to demonstrate an inhibitory effect on the growth of pathogenic fungi, while a decoction made from this plant showed a powerful inhibitory effect.36,37 Alkiewicz and his colleagues thus concluded that in addition to these mentioned and already known alkaloids, other components could also have fungistatic properties. As later studies showed, the agent (or agents) were thermostable in nature, water-soluble, and showed alkaloid properties.36,37

Alkiewicz’s studies on the applications of *Chelidonium* components as antiproliferative agents were among the first of such publications in international literature. At present, *Chelidonium* extracts containing various alkaloids are well recognized substances displaying antineoplastic and antiproliferative substances.38,39 Alkiewicz published a report in 1957 concerning fungistatic activity of some hydroxamic acids.40

The First International Mycology Conference in Poland was organized in 1963. It focused on the classification, epidemiology of dermatophytes, and immunology of infected hosts. The first meeting of the Mycological Section of the Polish Dermatological Society was held at this conference. Alkiewicz was elected the chair of the Society, with its headquarters in Poznań.

The Second International Mycology Conference in Poland took place in Poznań in 1967. The main subjects of the conference were nail mycosis and the phenomena of fungicidal immunity. Numerous representation of foreign guests included professors Raymond Vanbreuseghem (Antwerp, Belgium), J. C. Gentles (Glasgow, Scotland), Heine P.F. Seeliger (Würzburg, Germany), N. D. Szeklakov (Moscow, Soviet Union), A. N. Arawijski (Leningrad, Soviet Union), L. Chmel (Bratislava, Slovakia), M. Hejtmanek (Olomouc, Czeck), H. B. Levine (Oakland, Calif) and H. Braun (Leipzig, Germany) (Figure 3).

**Fig. 3** Second International Mycology Conference in Poland, Poznań 1967. Raymond Vanbreuseghem and Jan Alkiewicz (from the left).

**History of dermatology**

Alkiewicz was the author of the monograph entitled *Materiały do Polskiej Bibliografii Dermatologii i Wenerologii i ich pogranicza od XVI wieku do roku 1951* [Materials for the Polish Bibliography on Dermatology and Venereology and related disciplines from the 16th century until 1951], published by the Society of Friends of Science in Poznań in 1957. The work is a source of bibliographic data on dermatology and related fields, including the great majority—if not all—research papers on dermatology and venereology written by Poles in Polish and foreign languages in the period from the 16th century until 1951.

**Scientific output**

Professor Alkiewicz’s scientific output, including 103 research papers, of which 23 are related to onychology, published before World War II, were acclaimed as pioneering works by Professors Gans and Sertoli (Genoa). His post-
WWII works include the following monographs: *Grzybice skóry* [Skin Mycoses] (1955), *Bibliografia Dermatologii i Wenerologii* [Bibliography of Dermatology and Venereology] (1957), *Mikologia Lekarska* [Medical Mycology] (1966). The *Atlas der Nagelkrankenheiten* [Atlas of Nail Diseases], published in Germany in 1976 in cooperation with Professor R. Pfister and based mainly on Alkiewicz’s own photographic documentation, was highly recognized as the only publication of this type in the international onychologic literature (Figure 4).

Alkiewicz was the only Pole at the time who was a member of the editorial board of the journal *Mycopathologia et Mycologia Applicata*, published in Chicago. In 1963, the journal published a photograph of Professor Alkiewicz as one of the most outstanding contemporary mycologists. Alkiewicz was also a member of the editorial board of the journal *Mykosen*, published in Hamburg. Professor Alkiewicz was granted the Gold Medal of the Arts-Sciences-Lettres Academic Society in 1972 in recognition of outstanding achievements in science and literature. The Medal is a very precious distinction that has been granted to few Poles (eg, to the Curies).43

### References