

# Alexander Jeremiah Orenstein (26 September 1879, Odessa, Russia – 7 July 1972, Johannesburg)

**Rochelle Keene** - Independent Curator

Alexander Jeremiah Orenstein, referred to as the 'father of occupational medicine' in South Africa, was an internationally renowned expert in tropical medicine, public health, and medical research. He helped formulate policies in many fields of medicine in southern Africa, in these and other areas, making fundamental changes to the operation of mining in southern Africa.

Orenstein was born in Odessa, Russia in 1879 but grew up in the USA. He studied medicine at Jefferson Medical College in Philadelphia, and graduated as a doctor (MD) and received USA naturalisation in 1905.

That same year, he joined the American Armed Forces where he became a General and served until 1912. His first posting was to the Panama Canal Zone; the Canal was under construction at the time. There he served under General William C Gorgas, KCMG (1854–1920), a US Army physician and a pioneer in the eradication of yellow fever and malaria. Orenstein assisted Gorgas by controlling the mosquitoes that carry these diseases. The measures that were subsequently implemented by the Panama Canal Zone Sanitation Commission saved thousands of lives and contributed to the success of the Canal's construction. During that time, Orenstein also did pioneering work in combating pneumonia.

During 1913–1914, Orenstein accompanied Gorgas to German East Africa (now Tanzania) as an advisor on the control of malaria and plague to the German administration.

In 1914, Gorgas went to Johannesburg at the request of Rand Mines Ltd to advise on the health of miners in the gold mining industry with regard to measures to reduce the high incidence of pneumonia and tuberculosis (TB). He recommended that Orenstein be invited to help in the implementation of some of his recommendations. When Orenstein came to Johannesburg, he was appointed as superintendent of sanitation at Rand Mines Ltd as his American qualifications were not recognised. He later became chief medical officer there, a post he held until 1969.

In 1915, Orenstein went to London and, in 1916, qualified as a member of the Royal College of Surgeons (MRCS), England, and as a licentiate of the Royal College of Physicians (LRCP), London.

Towards the end of World War I, from February 1917 to June 1919, he served in the South African Medical Corps, attaining the rank of Lieutenant Colonel when he was appointed Director of Medical Services in November 1918. He was mentioned in despatches, and was created a Companion of the Order of St Michael and St George. He directed the public health measures introduced during the Spanish influenza pandemic just after the end of the War, through the Union Health Department, and helped curb the devastating epidemic that hit Kimberley, saving the lives of many citizens.



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After the War, Orenstein established a Department of Sanitation (later of Health) for Rand Mines Ltd and began to improve the poor sanitation and health conditions of mine workers, particularly their living conditions and diets. He introduced the appointment of full-time medical officers on the mines, introduced sweeping reforms in the layout of mine hospitals and compounds housing mine workers, greatly improved hospital facilities, gradually replaced male orderlies in the hospitals with black nurses, introduced training in first aid for mineworkers, and formed first aid teams.

Orenstein soon became recognised as the authority on the health of mine workers

and a leader in the affairs of the mining medical profession, reorganising the Mines Medical Services. The reforms that he introduced were soon adopted by other mining companies. He also acted as an unpaid consultant to the Chamber of Mines, and his work was later used in planning health services at new mines, such as those in the (then) Orange Free State province and the Zambian Copperbelt.

Orenstein worked in many southern African countries. He was asked to assist with malaria prevention in the Belgian Congo (now the Democratic Republic of Congo), and with the high mortality of Ovambo mine workers on the diamond fields in Namibia. In 1921, he and Prof. FK Kleine (1869–1951), an expert in tropical diseases, visited Northern Rhodesia (now Zambia) in connection with the control of Nagana (sleeping sickness). In 1925 and 1928, he was a delegate to the International Labour Conference in Geneva, Switzerland, representing South Africa.

During World War II, Orenstein served as Director-General of Medical Services in the South African Medical Corps, and left for east Africa in May 1940. He was promoted to Brigadier in October 1940. He served in east Africa, the middle east and in the United Kingdom. He was created a Commander of the Order of the Bath and a Companion of the Order of the British Empire. Orenstein was released from military service in August 1945 with the rank of Major-General.

Orenstein was a foundation member and first vice-president of the Mine Medical Officers' Association (now the Mine Medical Professionals Association), and sat on the Prevention of Accidents Committee, now the Mine Safety Division, of the Chamber of Mines from 1914 to 1956. He was also a member of the South African Association for the Advancement of Science (1915), and the South African Institute of Mining and Metallurgy (1916). As the representative of the Witwatersrand Branch of the British Medical Association, he was one of the founders of the Associated Scientific and Technical Societies of South Africa (1920); he served as vice-president during its first year and as president in 1921 and 1922. In 1917, he was a member of the

Medical Advisory Committee that participated in negotiations to establish a medical school in Johannesburg. In 1923, he was appointed as the first lecturer in tropical medicine at the University of the Witwatersrand and, in 1931, he was awarded a Doctor of Laws (LLD) degree (*honoris causa*) by the same university.

Other honours awarded to him include gold medals from the Mine Medical Officers' Association, the South African Medical Association for distinguished services in the field of medicine (1926), and the Institution of Mining and Metallurgy (1958), London, the last being the highest honour to be bestowed on men who had served the mining industry. In 1970, he received the Alumni Achievement Award from the Alumni Association of the Jefferson Medical College. He was an honorary fellow of the Royal Society of Tropical Medicine and Hygiene, and of the Royal Society of Medicine.

Orenstein was also presented with numerous civilian awards, including the Panama Canal Service Medal, the Belgian *Croix de Chevalier de l'Orde de la Coutonne* in 1925 (Order of the Crown of Belgium) for his work in the Belgium Congo, and the gilt emblem to the Voluntary Medical Service Medal from the Red Cross Society.

In 1956, Orenstein was appointed as the first director of the Pneumoconiosis Research Unit (PRU) established by the Council for Scientific and Industrial Research, in Johannesburg, but continued to consult to Rand Mines. He served as general secretary to the Pneumoconiosis Conference in Johannesburg in February 1959, and as editor of its proceedings (1960).

Orenstein wrote a book on *Mosquito Control in Panama; The Eradication of Yellow Fever in Cuba and Panama* (New York, 1916) and published around 100 papers in local and international journals, on topics such as malaria prevention, the etiology of scurvy, hookworm disease, public health, and the health of miners.

Orenstein lived in a house in Saxonwold, Johannesburg, now known as the Villa d'Este, now a National Heritage site. He enjoyed music, reading, and the theatre, and was one of the founder members of the Johannesburg Repertory Players and the Alexander Theatre. He also enjoyed motoring and flying, and was one of the founders of the Light Plane Club.

An inaugural lecture, held in 1962 at the inception of the Museum of the History of Medicine, was delivered by Major General Orenstein under the auspices of the Museum and the Medical Graduates' Association. After he died in 1972, at the age of 92, the name was changed to the AJ Orenstein Memorial Lecture at the suggestion of the Chamber of Mines of South Africa to perpetuate his memory and to commemorate the part he played in the establishment of the medical services in the mining industry.

## SOURCES

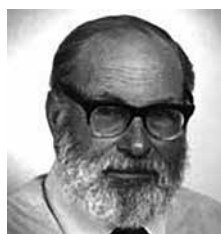
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# John Christopher Wagner

## (11 April 1923, Pretoria – 25 May 2000, Dorset)

**Prof. Emeritus Cedric Bremner** - Department of Surgery, Faculty of Health Sciences, University of the Witwatersrand  
**Rochelle Keene** - Independent Curator

John Christopher Wagner was a pathologist who researched the health effects of exposure to asbestos fibres. He was one of the most outstanding authorities on asbestos-related diseases, both from a pathological point of view and in relation to his expertise on the experimental approach to asbestos toxicology. His work provided milestones in research work on asbestos toxicity. His results were of paramount importance in the regulation of asbestos use, providing a better understanding of asbestos-related diseases. In addition to his work on asbestos, he and his co-workers studied a similar type of fibre, called erionite, in collaboration with Prof. I Baris, a Turkish clinician, who had discovered a high mortality rate due to mesotheliomas in some areas in Turkey. The findings of fibrogenicity and carcinogenicity of erionite in rats provided an important demonstration of the ability of other types of fibres



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to produce lung and pleural damage. He became internationally known for his work on occupational lung diseases.

John Christopher Wagner was born in Pretoria in 1923. His father, Percy Wagner, was an eminent economic geologist, and the Director of the South African Geological Survey. He described many mineral deposits in Africa, including asbestos, diamonds, gold and platinum. The family, originally German, had emigrated from London in 1810. He was six years-old when his father died. He was educated at Michaelhouse in present-day KwaZulu-Natal and went to the University of Natal in 1941. In 1942 he joined the South African Field Artillery, taking part in the north African and Italian campaigns.

After the war, he returned to Johannesburg to study for a MBChB degree at the University of the Witwatersrand Medical