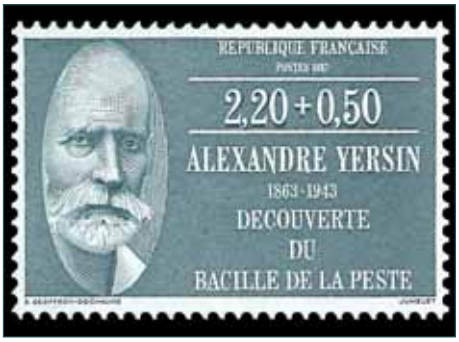
Singapore Med J 2012; 53(9) : 564

Alexandre Yersin (1863–1943): Vietnam's 'Fifth Uncle'

Siang Yong Tan[1], MD, JD, *Joy K Zia*[2], BA

You ask me if I appreciate medical practice. Yes and no. I have a lot of pleasure in taking care of those who come to ask my advice, but I would not like to make medicine a trade; in other words, I could never ask a patient to pay me for care that I can give him. I regard medicine as a priesthood, as much as a pastoral one. To require money in exchange for providing care to a patient amounts to demanding from him his money or his life. – Alexandre Yersin

If you visit Ho Chi Minh City (formerly Saigon), or some other towns in Vietnam, it is likely that you will walk down a Yersin Street, named after the Swiss-French bacteriologist Alexandre Yersin. Although he co-discovered the plague bacillus that bears his name, he is better known throughout Vietnam as Ông Năm, meaning 'Fifth Uncle.' Vietnam's 'First Uncle' is Ho Chi Minh, the man who liberated the country from French rule. Yersin earned his place in the hearts of the Vietnamese people by treating the sick, providing vaccinations, building hospitals, erecting medical laboratories and founding communities. In 1902, he helped to create the Medical School of Hanoi, and served as its first director. More than his landmark scientific discovery, this humble man performed great deeds, and his care and compassion changed the lives of many.



GOLDEN AGE OF BACTERIOLOGY Alexandre Yersin was born in a Swiss village on the edge of Lake Geneva in 1863, the youngest of three siblings. His Swiss father was a high school biology teacher who died three weeks before Yersin was born. Yersin's schooling took him from Switzerland for high school, to Germany for a degree in literature, and eventually to Paris to study medicine. Paris was brimming with wealth and excitement during the 'Golden Age of Bacteriology' when French scientists discovered myriad disease-causing microbes. It was also an age famous for impressionist artists such as Vincent Van Gogh, Monet, Renoir and Pissarro.

In this privileged environment, Yersin, who became a naturalised French citizen in 1889, was influenced by two important men, Louis Pasteur and his associate, Pierre-Paul-Émile Roux, a prominent bacteriologist in his own right. While performing an autopsy on a patient who had died of rabies, Yersin accidentally cut himself and was saved by Roux's newly developed anti-serum. Roux hired him as his assistant, and together their work on rabies led eventually to a vaccine against the disease. The two became friends and went on to discover the diphtheria toxin, an inaugural unearthing of a biological poison capable of causing human disease.

EXPLORING INDOCHINA Yersin was not content to continue as a microbiologist, and in 1890, he unexpectedly left the Pasteur Institute to become an explorer. It has been conjectured that he wanted to escape the stifling ego of Louis Pasteur. More likely, it was because he had always yearned to travel the world as a medical adventurer, emulating Dr David Livingstone, the famed Scottish medic who explored Africa. So in 1890, he obtained employment as a ship doctor on the *Messageries Maritimes*, a steamer line travelling within French Indochina based out of Saigon. He learned the Vietnamese language from the sailors on board, acquired navigation skills and even worked for the Indochina Meteorological Service as a cartographer and tide table maker.

Indochina, comprising Cambodia, Laos and Vietnam, greeted Yersin's arrival during the French "civilising mission" of her new colony. The Vietnamese people endured hardships and brutality, many reduced to slave labourers. Yersin himself admired the courage shown by those who were intimidated by torture, imprisonment or death by guillotine or gunfire, but nonetheless turned "a blind eye" to the atrocities. Still, he is said to be more just than many colonialists, and on one occasion, after being robbed by Vietnamese thieves, he wrote to his mother that "*the French have always stolen from the people in Indochina, so it might be quite good that they can steal a bit of my money back.*"

His contract with the *Messageries* over, Yersin then became the explorer he had dreamed of, travelling by canoe and by elephant, and treating those in need in the remote jungle. He viewed his physician role as a way of living, not a source of work. He led major expeditions through uncharted territories throughout Indochina, but his travels also took him to other parts of South-East Asia and later, to India and China. Back in Paris in 1892, he regaled Pasteur and others with stories of his adventures, but he did not remain long and soon returned to Indochina.

[1]Emeritus Professor of Medicine, University of Hawaii, [2]Research carried out during senior elective, John A. Burns School of Medicine, Honolulu, Hawaii
Correspondence: Prof Tan Siang Yong, 2226 Liliha Street, Suite 215, Honolulu, HI 96817, USA. siang@hawaii.edu

BLACK DEATH In 1894, the French government and the Pasteur Institute dispatched him to Hong Kong to investigate a sweeping pneumonic plague epidemic. This was the same 'Black Death' of medieval history that wiped out a third of the European population between the 13th and 15th centuries. Rapidly fatal and contagious, the plague destroyed the lungs of its victims or left them with black surface lesions that looked like digested skin. Yersin identified the causative organism as *Pasteurella pestis* at about the time his opponent, an illustrious scientist named Shibasaburo Kitasato, made the same discovery. The name of the plague bacillus was subsequently changed to *Yersinia pestis* in honour of Yersin who was also able to isolate the bacillus from both humans and rodents, and identified fleas that bit infected animals as the vector. Yersin would be part of the French team that included Roux, Calmette and Borrel, which developed the first anti-plague serum. This was perfected and produced in Yersin's laboratory in Nha Trang in 1895, which became a part of the Pasteur Institute.

VIETNAM'S 'FIFTH UNCLE' Yersin's scientific triumphs were eclipsed by the death of his mother in 1905. He loved her dearly, and wrote weekly letters in which he described his work and adventures, some 1,000 copies surviving to the present day. He also wrote numerous letters to his niece, Dr Mollaret, which offered additional glimpses into Yersin's character. Microbiology thereafter became a mere hobby. He lived simply among the Vietnamese people, and has been described as "*a kind neighbour, who often helped elders and fishing people, loved children. He was a model writer, he lived very simply, rich in benevolence, and the villagers called him an intimate name, Năm (Five).*" He developed a knack for agriculture, and sustained himself by cultivating corn, rice and coffee. He is also credited with importing the rubber tree, *Hevea brasiliensis*, which spawned a vibrant and profitable industry in Indochina and was commercially exploited by the French-owned Michelin Company. Yersin also established the first quinquina farms in Vietnam that produced quinine to treat malaria.

In 1941, after a final visit to France, Yersin returned to his beloved Vietnamese home in Nha Trang. In his will, he asked to be buried in his adopted Asian country. Shy, humble and introverted, he is believed to have married but was without an heir. Ill and alone during the Japanese occupation of Indochina, Yersin died on March 1, 1943 at the age of 80. Not only were streets named in his honour, but his burial site is still visited annually, where rites of worship are performed under the pagoda that was built for him. His dwelling place in Nha Trang, an abandoned barracks house painted white, became a museum and a shrine. The Vietnamese call it Lau Ông Năm, or Home of the Fifth Uncle. In his honour, there is also a French school in Hanoi that bears his name. Perhaps the simple epitaph on his tombstone best describes Alexandre Yersin: "*Benefactor and humanist, venerated by the Vietnamese people.*"

BIBLIOGRAPHY

- Alexandre Yersin [online]. Available at: www.lamdong.gov.vn/en-US/home/DaLatcity/Pages/Alexandre-Yersin.aspx. Accessed August 15, 2012.
- Alexandre Yersin. In: Wikipedia [online]. Available at: en.wikipedia.org/wiki/Aledandre_Yersin. Accessed April 18, 2006.
- [Alexandre Yersin]. In: Onmeda [online]. Available at: www.onmeda.de/lexika/persoenlichkeiten/yersin.html. Accessed April 18, 2006. German.
- [Alexandre Yersin (1863-1943)]. In: Portail Institut Pasteur [online]. Available at: www.pasteur.fr/infosci/archives/yer0.html. Accessed April 18, 2006. French.
- Alexandre Yersin. In: Vietscape [online]. Available at: www.vietscape.com/travel/dalat/yersin1.html. Accessed April 18, 2006.
- Alexandre-Émile-John Yersin. In: Who Named It? [online] Available at: www.whonamedit.com/doctor.cfm/2454.html. Accessed April 18, 2006.
- Butler, T. Plague and other Yersinia Infections. Available at www.clevelend.com/plague/pdf/butler_book_excerpt_day_1.pdf. Accessed August 15, 2012.