

1

CHAPTER

Royal Thai Army Institute of Pathology, where space was provided for the SEATO Cholera Research Laboratory in 1959. (Photograph courtesy of Lieutenant General Laphul Phintuyothin)





King Bhumibol Adulyadej shakes hands with Dr. Joseph Smadel at the beginning of an October 1959 audience at the palace as Dr. Phin watches.
(Photograph courtesy of Joseph Smadel Papers, Gorgas Memorial Library, Walter Reed Army Institute of Research, Silver Spring, MD)



Origins

THE ARMED FORCES RESEARCH INSTITUTE OF MEDICAL SCIENCES

(AFRIMS) started out, in 1959, as the Thailand SEATO Cholera Research Project (CRP) in Bangkok. The Southeast Asia Treaty Organization (SEATO) had been created in 1954 primarily to contain communism in the region. Between 1955 and 1958 Viet Minh forces infiltrated Cambodia and invaded Laos, threatening northeastern Thailand. During the spring of 1958, a cholera epidemic, the first in almost 10 years, began near Dacca, East Pakistan, spread through Calcutta, India, and hit Bangkok and surrounding provinces, with both public health and political consequences. A similar cholera outbreak appeared to be underway in the spring of 1959.

At the fifth annual meeting of the SEATO Council, in April 1959, the US representative and ambassador to Thailand, U. Alexis Johnson, secured backing for a cooperative cholera research project under SEATO sponsorship that would be facilitated through the US National Institutes of Health (NIH) with \$400,000 in start-up funds. Ambassador Johnson proposed the establishment of the CRP in an exchange of diplomatic notes¹ with SEATO Secretary General Nai Pote Sarasin, who secured full member-nation approval as well as pledges of facilities and personnel support from Thailand and Pakistan.

In June 1959, the director of the NIH appointed Dr. Joseph Smadel to develop an organizational plan and recommend a location for the CRP in South or Southeast Asia. Smadel, previously director of the Division of Communicable Diseases and the Department of Virus and Rickettsial Diseases at Walter Reed Army Institute of Research (WRAIR), put together the NIH Cholera Advisory Committee (NCAC), composed of Theodore Woodward, professor of medicine, University of Maryland School of Medicine; Colin MacLeod,

Dr. Joseph E. Smadel, deputy director of the NIH and former scientific director of WRAIR, was chairman of the NIH Advisory Committee on Cholera and led the group that visited Thailand in 1959 to discuss the possibility of a collaborative laboratory. (Photograph courtesy of Joseph Smadel Papers, Gorgas Memorial Library, Walter Reed Army Institute of Research, Silver Spring, MD)



professor of experimental medicine, University of Pennsylvania School of Medicine (and a close advisor to the NIH director and an informal advisor to President Eisenhower); John Dingle, professor of preventive medicine, Case Western Reserve University; Kenneth Goodner, professor of microbiology, Jefferson Medical College; and Colonel Richard Mason, commandant of WRAIR. All members of the committee were World War II medical officers and members of the Armed Forces Epidemiology Board commissions: Mason and Goodner on the Commission on Enteric Infections, and the others on the Commission on Epidemiological Surveys, which was primarily concerned with medical research on defense against biological warfare agents, including cholera. (Like plague, cholera was known for its potential to create fear, panic, and instability in a population or country.)

Over the summer of 1959, the NCAC met to study the charge from Ambassador Johnson and formulate plans for a CRP, including consideration of the following:

1. A comprehensive review of cholera and the situation in South and Southeast Asia.



2. Congressional legislation introduced that year to institute international cooperative programs in health research, training, and planning, with NIH supervision and grants.
3. Contingency planning by the US Army Medical Research and Development Command, anticipating conflict in Southeast Asia, that had identified Thailand as a critical site for a medical research laboratory to support medical requirements in the region.
4. US political and foreign policy considerations in support of Thai-US relations, US regional interests, and strengthening of SEATO.
5. Armed Forces Epidemiology Board concerns over cholera as a threat to regional stability.

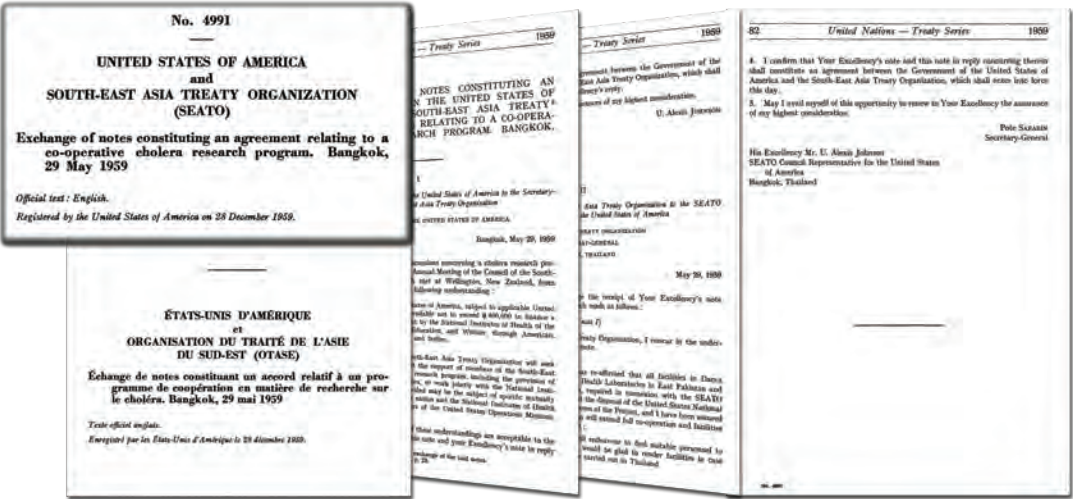
The NCAC concluded by August 1959 that the scientific choice for location of the SEATO CRP was Dacca, East Pakistan, and that, for US military and foreign policy reasons, the political choice was Bangkok, Thailand. The committee then traveled to Asia to assess various sites and prepare final recommendations. After Tokyo and Manila, the NCAC stopped in Taipei to meet with Captain Robert Phillips, commander of the Naval Medical Research Unit-2 (NAMRU-2) and a leading authority on cholera. The previous year, at the invitation of the Thai government, Phillips led a NAMRU-2 team to Thailand that set up a laboratory and ward at Chulalongkorn Hospital to perform electrolyte balance studies on patients with acute cholera. Phillips had also been consulted by Ambassador Johnson on the requirements for a cholera research program

Audience with King Bhumibol Adulyadej at the palace, October 1959, including Dr. Phin, Dr. Smadel, and other members of the NCAC. As the research proposal was discussed, Professor Woodward records that the King asked, "Yes, Dr. Smadel, but how will the research help my people?"² The king's concerns were answered and the project went forward; in fact, Thai Army leadership still quote King Bhumibol's question today, and it continues to guide the work of the Institute. With the king (far left) are Richard Mason, Theodore Woodward, Phin Muangman, John Dingle, Colin MacLeod, Kenneth Goodner, and Joseph Smadel. (Photograph courtesy of Joseph Smadel Papers, Gorgas Memorial Library, Walter Reed Army Institute of Research, Silver Spring, MD)

using NAMRU-2 as a model. When cholera returned to Bangkok the following year, a US Army team that included captains Scott Halstead, Eugene Gangarosa, William Beisel, Eugene Blair, and F.L. Orth from WRAIR, and Lieutenant Colonel Oscar Felsenfeld, a pathologist from the 406th General Medical Laboratory in Japan, arrived in Bangkok to work with investigators at Chulalongkorn Hospital.

In Bangkok the NCAC met with Lieutenant General Thanom Uppathampanonda, surgeon general of the Royal Thai Army (and later a crucial architect of the Thai army and US Army joint medical research facilities and programs), and Colonel Pung Phintuyothin, director of the Thai Army Institute of Pathology. The meeting was facilitated by Professor Phin (Pyn) Muangman (also known as Dr. Pyn), undersecretary of health for Thailand. The Institute of Pathology offered laboratory facilities on its third floor for the SEATO CRP. The committee next was granted an audience with King Bhumibol Adulyadej, the son of a Harvard-trained physician, and presented the plan for the joint project.

Diplomatic notes that were the basis of the 29 May 1969 agreement to establish a SEATO cholera research program in Bangkok. (MFN#3759, AFRIMS photograph archives)





King Bhumibol Adulyadej (second from right) visits the Royal Thai Army Institute of Pathology on 4 September 1959. Major General Pung (second from left), director of the Institute, leads the king's visit to the saline production facility that made sterile fluid for rehydration of cholera patients. (Photograph courtesy of Lieutenant General Laphul Phintuyothin)



Professor Phin (Pyn) Muangman, the “father of Thai radiology” and former dean of Siriraj Hospital Faculty of Medicine, as undersecretary of health arranged the committee’s audience with the king for discussions about establishing a joint cholera research laboratory. Dr. Pyn was director general of the SEATO Cholera Research Laboratory from 1959 to 1960. (Photograph courtesy of Mahidol University, Bangkok, Thailand)

Although the NCAC was impressed by the professional qualifications and experience of Bangkok’s medical community, its laboratory resources, and the country’s relative political stability, Thailand was not the logical choice for location of the CRP, with cholera at most episodic and apparently receding that spring. Still, in line with earlier considerations, the committee recommended to the SEATO Council that Bangkok be the CRP’s temporary location. In response to a diplomatic note (No. 1878, 8 December 1959) from Ambassador Johnson, the Thai minister of foreign affairs, Thanat Khoman, replied that the Thai Ministry of Public Health was authorized to cooperate with the United States in establishing the Thailand SEATO CRL. Operations commenced in late December, with Dr. Pyn as director general, Lieutenant Colonel Felsenfeld as executive director, and Colonel Pung as laboratory director.

Meanwhile, the committee recommended that the permanent home for the SEATO CRP be Dacca, East Pakistan (later Bangladesh), based on large numbers of cholera patients, year-round exposure to cholera, and an enthusiastic promise of facilities and personnel by the Pakistani government. The SEATO Council endorsed both the Bangkok and Dacca recommendations, and the International Cooperation Administration (later the US Agency for International Development) procured the funding needed to support both the Thailand and Pakistan laboratories. The Pakistan SEATO Cholera Research Laboratory (later the International Centre for Diarrhoeal Disease Research, Bangladesh) began operations in Dacca in 1961. Dr. Fred Soper was the first director, although only briefly; he was replaced the next year by Colonel Abram (Bud) Benenson.

In Thailand, the SEATO CRL became the SEATO Medical Research Laboratory (MRL) in January 1961 after an exchange of diplomatic letters in December 1960 between the US Department of State, the Royal Thai Ministry of Foreign Affairs, and SEATO headquarters. The SEATO MRL was then quickly restructured following discussions among Felsenfeld, Pung (now director general) and Benenson (then director of the Division of Communicable Disease and Immunology at WRAIR), and augmented in mission, personnel, and resources. A comprehensive survey of medical research resources in Asia Pacific by Colonel William Tigertt for the US Army Medical Research and Development Command confirmed the strategic importance of the SEATO MRL. During and after the Vietnam conflict, the MRL conducted medical research on infectious diseases important to the soldier and public health. The MRL also provided research and reference laboratory support, teams, and medical experts to support the US Army Medical Research Team from WRAIR in Vietnam during the war. The SEATO MRL became AFRIMS in 1977 and remains the largest US Army overseas medical research laboratory.

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