E3. What Can A Pharmacist Do? A History of 20th c. Pharmaceutical Professionalization in Japan and China

E3:1 JJ Strange, *Growing Medicine: Huang Minlong and the rise and fall of botanical pharmaceutical research in twentieth-century China*

Huang Minlong (黃明龍 py: *Huang Minglong*), known as the father of steroidal chemistry in China, is remembered as a pioneer of chemistry in China and was the first Chinese scientist to have a chemical synthesis named after him. However, despite this illustrious career as a chemist, his publication history reveals a different identity. In the pages of the Journal of Pharmacy (藥報) and his brother's *Dr. Huang Medical Journal* (醫藥學雜誌), Huang Minlong was a pharmacist whose keen interest in botanical pharmacy pushed trained chemists and pharmacists alike to investigate the vast pharmacopeias of traditional Chinese medicine. Between the 1920s and the 1950s, this research developed in shared laboratory spaces for chemistry and pharmacy. In the 1950s, the focus shifted sharply away from botanical research, and Huang Minlong became a chemist, leaving behind his identity as a pharmacist and the botanical research he had once championed.

By examining a single professional's career, I trace the changing meaning of pharmacy and what constituted medicine in China, as well as the shifting expectations of the pharmaceutical market and research. Medicine, until relatively recently, was extracted from organic matter; however, in the twentieth century, the biochemical definition of medicine became standard for those trained in Euro-American medicine. Moreover, even among traditional practitioners, chemical compounds became a means to legitimize their prescriptions. I conclude that the barrier to continuing botanical research on traditional Chinese herbs had more to do with the time it took to obtain results and international requirements for evidence, forcing phytochemists like Huang Minlong to shift away from pharmacy and adopt chemist identities.

Learning Outcomes

- Recognize the dynamic interrelationship between medicine and society through history.
- Develop the capacity for critical thinking about the nature, ends, and limits of medicine, particularly in transforming traditional pharmacopeias into a biomedical system.

E3:2 Yaming You, *Reinventing Bencao: The Manchurian Medical College and Traditional Chinese Medicinal Drugs in Japan's Informal empire, 1910s-1940s*

This project looks at pharmaceutical exchange between Japan and China in the early twentieth century, with a particular interest in the Manchurian Medical College as a research center for traditional Chinese drugs and classical Chinese materia medica (bencao 本草) at the colonial contact zone of Manchuria. Compared to modern biomedicine, I argue that traditional drugs serve as a more interesting case to study Japan's civilizing mission and scientific imperialism, for traditional Chinese drugs connected Japan and China through the supposedly shared bencao tradition and became an example par excellence of a shared cultural identity.

I choose to hone in on a single figure, Okanishi Tameto, whose life story exemplifies the importance of the colonial encounter in the development of traditional medicinal drugs in East Asia. Okanishi's method of studying traditional Chinese medicinal drugs in northern and northeastern China represented an important practice in studying traditional drugs shared by many (foreign) scientists in China between the 1920s and 1940s: the combination of bencao textual study, field work, and laboratory experiments. For one, the distinction between "landscapes" and "labscapes," or the lab-field border, did not exist. For another, Okanishi, and many other pharmaceutical scientists could not ignore the vast Chinese classical bencao literature on medicinal plants, animals, and minerals. The humanistic method of close reading was essential to their modern botanical, laboratory, and ethnographic work.

<u>Learning Outcomes</u>

- Promote tolerance for ambiguity of theories, the nature of evidence, and the evaluation of appropriate patient care, research, and education
- Recognize the dynamic interrelationship between medicine and society through history.

E3:3 Minji Kim, *Unattributable Harm and State Compensation: The (In)visibility of the Agent Orange Issue in South Korea since the 1990s*

Agent Orange became a contested issue in South Korea three decades after the Vietnam War, when veterans began reporting illnesses they attributed to toxic exposure. Media attention in 1991–1992 spurred the government to enact the Act on Assistance to Patients Suffering from Actual or Potential Aftereffects of Defoliants. While this legislation created a framework for medical aid and compensation, it did not rest on medical or legal proof of causation. Instead, the state instituted a category of recognition—"Agent Orange victims"—that was valid only within administrative policy, rendering harm simultaneously visible for compensation and invisible in scientific or legal terms.

The experience of South Korean veterans underscores the paradox of being compensated without perpetrators. Lawsuits against the government and against U.S. chemical manufacturers failed, most decisively in a 2013 Supreme Court ruling that dismissed claims for lack of proven causation. As a result, veterans could secure recognition solely through the Ministry of Patriots and Veterans Affairs. The state's welfare system thus became the only avenue of validation, sustaining compensation despite unresolved scientific uncertainty.

Revelations that defoliants had also been sprayed in the Korean Demilitarized Zone expanded the scope of potential victims, but recognition continued to soldiers, excluding civilians. This hierarchy illustrates how victimhood was rationed through institutional frameworks that reinforced military service as the basis for legitimacy.

By analyzing the shifting boundaries of recognition, this paper situates South Korea's Agent Orange controversy within broader histories of toxic exposure and militarized medicine. It argues that compensation was institutionalized as a political substitute for medical certainty, highlighting how states navigate uncertainty, generate categories of patients, and administer justice in the absence of demonstrable causality.

<u>Learning Outcomes</u>

- Recognize the dynamic interrelationship between medicine, law, and society
- Develop historically informed sensitivity to patients and families affected by contested or stigmatized conditions