International Convention of Asian Scholars (ICAS 8)

Herbal Pharmaceutical Industry in Asia. Reformulating Drugs for the Global Market

Workshop (Double Panel)

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Synopsis

This workshop will examine drug reformulation in the Asian herbal industry as a form of alternative modernity which contrasts in key ways with the molecular paradigm that has dominated pharmaceutical inventions since WWII. Since the early twentieth century, traditional herbal formulations in Asia have often been redesigned to foster new domestic markets, to facilitate the exportation of medicines and to answer the needs of an ever increasing number of global consumers. The Asian herbal industry wished to demonstrate its excellence by complying with “good manufacturing practices”, sought WHO and FDA certifications and entered into vast transnational networks. However, the extension of procedures for pharmaceutical production and for standardizing laboratory practices in this sector is by large original. The Ayurvedic, Chinese, Tibetan or again Kampo herbal pharmaceutical industries produce new regimes of compound-based drug discovery which mix, transform and overlap medical cultures and traditions. This has involved the creation of heterodox-, ‘transcultural epistemologies’, which have then allowed the creation of new “traditional” products, the indications of which draw increasingly from biomedicine categories.

These newly formulated drugs are the object of specific systems of appropriation (through patent, the building of ‘legal’ databases, proprietary protection by trademarks, etc.), which have not only gained central stage in countries like India and China, but also influenced international regulatory bodies. At the same time, this industry is constrained by national and international regulatory environments, which play an important role in shaping innovation processes, as well as the production and diffusion of drugs. This panel therefore seeks to explore the way by which the Asian herbal industry is subjected to a variety of regulatory environments as much as it has fostered the emergence of alternative models of property rights, and their global acceptance, as well as to how in turn, these new forms of property have today come to drive pharmaceutical innovation itself. By providing historical and anthropological analysis of the mutual reinforcement between innovation patterns, market construction and legal protection in India, China, Taiwan, Japan and South Korea, this workshop aims to set out new research avenues to study the industrialization of traditional medicine and the complex interface between regulatory systems, innovation processes, and the market.
Chair
Laurent Pordié, CNRS (Cermes3 –CNRS/EHESS/Inserm), Paris

Panel I
Discussant: Francis Zimmermann (EHESS, Paris)

- Assembling Diasporic Science or Making Herbs a Global Business: CGCM and the Regulatory Globalization of Chinese Medicine
  Wen-Hua Kuo (National Yang-Ming University, Taiwan)

- Plants, the Practices of Reformulation and the Construction of Ayurvedic Markets: The Trajectory of Jeevani and other Polyherbals.
  Jean-Paul Gaudillière (Inserm-EHESS, Cermes3, Paris)

- Herbal Pharmaceutical Industry in Korea: Particularities and Universalities over Commercialized Herbal Medicines
  Eunjeong Ma (Pohang University of Science and Technology)

- Pharmaceuticalizing Practices of the Sacred in Globalized Tibetan Medicine
  Vincanne Adams (University of California San Francisco)

Panel II
Discussant: Vincanne Adams (University of California San Francisco)

- From Kampo to “Scientific Chinese Medicine”: A Case of Pharmaceutical Development in Transnational East Asian Context
  Hsueh-Yi Lin (University of Wisconsin-Madison)

- Globalising Kampo: The Possibilities and Limits to Translation in Global Markets
  Maki Umemura (Cardiff University)

- Reformulation and the Cognitive Process of Translation
  Francis Zimmermann (EHESS, Paris)

- Patterns and Constraints of Drug Discovery in the Ayurvedic Industry. Innovation, Global Markets and Proprietary Medicines
  Laurent Pordié (CNRS, Cermes3, Paris)
Abstracts

Pharmaceuticalizing Practices of the Sacred in Globalized Tibetan Medicine

Vincanne Adams (University of California San Francisco)

The travels and translations of pharmaceutical sciences offer compelling evidence that global scientific standards for research and studies of efficacy in traditional pharmaceuticals are highly debated. This paper explores the passage points and problems of science emerging at the intersection where religious and scientific knowledge meet in the effort to globalize Tibetan medical therapies. Within China, Tibetan medicine is required to meet production, quality and efficacy measures which conform to the norms of a global pharmaceutical market where multi-stage randomized clinical trials are the gold standard. Tibetan medicine is reduced to formulaic versions of diseases and pharmaceutical treatments. From the perspective of consumers in China and the West, Tibetan medicine is attractive precisely because of its sacred qualities and resonances with traditional religious conceptualizations of mind/body/health. Competing demands for knowledge and different kinds of practice in Tibetan medicine intersect in ways that foreground how Tibetan medicines exceed the norms of scientific measurement (in medical blessings and meditation therapeutics), only to be brought back in through emergent studies of the contemplative sciences in both China and the US. This paper interrogates these epistemological and cultural debates as an underexplored topic in the study of global pharmaceutical science.

Plants, Reformulation and Ayurvedic Markets: The Trajectory of Jeevani and other Polyherbals

Jean-Paul Gaudillière (Inserm-EHESS, Cermes3, Paris)

A critical dimension of the contemporary industrialization of Ayurvedic medicine is the problem of plant management. While a sizeable proportion of the literature focuses on issues pertaining to the demands for sufficient and good quality raw materials, the search for suitable ingredients also has profound consequences on innovation practices and the reformulation strategies pursued by the 'modernizers' of Ayurveda. This paper examines in this light the trajectory of Jeevani, a commercial anti-fatigue formulation, which includes, among others, the plant arogyapacha (Trichopus zeylanicus), the medicinal properties of which have been known through ethnobotanical surveys conducted in South India. Focusing on the research and development projects done at, or in collaboration with, the Kerala Tropical Botanical Garden, I will follow the work completed to define the properties of arogyapacha, the choices of ingredients and medical targets for the new formulations, the testing of candidates therapeutic combinations, and the various ways in which a control of the putative market was sought, including patent protection. Based on this material, the paper will discuss three aspects of the reformulation regime in the ‘pharmaceuticalization’ of Ayurvedic remedies: a) the alternative modes of raw material supply; b) the relationship between new formulas, their medical targets on the one hand, and Ayurvedic classical texts and pharmacology on the other hand; c) the ways in which traditional knowledge is given a formal existence and formalized in order to make it accessible, protect it and construct markets.
Assembling Diasporic Science or Making Herbs a Global Business: CGCM and the Regulatory Globalization of Chinese Medicine

Wen-Hua Kuo (National Yang-Ming University, Taiwan)

This study aims to understand the scientific attempts to globalize Chinese medicine from the drug development perspective. As an emerging phenomenon associated with an increasing interest in China and its traditional medical wisdom, Chinese medicine has been studied by humanities scholars (mainly sinologists), medical historians, and, recently, medical anthropologists. Complementing their observations on the spread of Chinese medicine with local varieties and modifications, this study will pay particular attention to its material and regulatory aspects by looking at how to establish a scientific consensus in order to build a sound regulatory scheme without sacrificing the essence of Chinese medicine and the health of its users.

The above concerns led this study to the Consortium for Globalization of Chinese Medicine (CGCM), a mission-oriented platform created by scientists in pursuit of advancing the field of Chinese medicine. Originated in 2003 by a group of pharmacologists led by world-renowned Yale professor Yung-chi Cheng, in its first seven years, the CGCM has grown into an alliance of more than 100 institutional members from China, Taiwan, and Hong Kong. The CGCM network is also extending to top universities in Korea, Japan, the United Kingdom, Australia, and the rest of the world. Focusing on herbs and their global regulations, this study plans to trace not just how a scientific base can be made for Chinese medicine but also the very social networks and cultural assemblages required to do so.

From Kampo to “Scientific Chinese Medicine”: A Case of Pharmaceutical Development in Transnational East Asian Context

Hsueh-Yi Lin (University of Wisconsin-Madison)

This paper examines a new kind of medicine that was developed in mid-twentieth century Taiwan, namely “Scientific Chinese Medicine,” in the contexts of East Asian modernization. Narratives of modernization had in the past often presumed unreserved efforts to the seemingly universal processes of Westernization. Less has been considered is how the local contexts, including production networks and trans-regional connections, may in turn inform us precisely how different traditions were accommodated as well as the convergence and divergence in the various trajectories of modernity. My lens into this pluralist vision of modernization is the case study of the development of “Scientific Chinese Medicine”—which was inspired by the Japanese attempt to modernize the Kampo medicine (Japanese adaptation of traditional Chinese medicine)—in post-war Taiwan. Studying how these two kinds of medicine along with their discourses took shape and transformed in the respective political and cultural contexts of Japan, China, and Taiwan before and after the World War II, I argue that while medical modernization was an overarching goal shared by all, this goal had in fact acquired different meanings and was subject to manipulation due to the specific attitudes towards and accommodations of each tradition.

Herbal Pharmaceutical Industry in Korea: Particularities and Universalities over Commercialized Herbal Medicines

Eunjeong Ma (Pohang University of Science and Technology)

This paper addresses a recent history of (re)organization of herbal pharmaceutical industry in South Korea. Since the mid-1990s, the South Korean government has made huge investment
in selling Korean Oriental Medicine (OM) to the domestic market and the global market. The government either rearranged manufacturing and clinical trial guidelines or newly institutionalized government-subsidized research facilities, whose arrangements were made to turn the local herbal pharmaceutical industry competitive in the global market. In the early 2000s, it further established legal foundations to cultivate the OM industry and solicited local pharmaceutical companies to jump into the potentially lucrative herbal market. Incidentally, local pharmaceutical industry underwent restructuring, some of which went bankruptcy. And others, who seemed to have swiftly repackaged and commercialized herbal products as nutritional products, were able to survive and dominate the market. All these government-initiated changes were made possible, as consequences of OM supporters’ decades-long fights against the government’s indifference, on one hand. On the other hand, OM practitioners have waged a sequence of dispute against Western biomedicine practitioners (including pharmacists) to legitimize their practices in clinical, educational and legal settings. Hence, in this paper I will briefly discuss OM’s (re)emergence in the market in historical and political contexts, and move on to the discussion on transnationalizing/globalizing strategies of the herbal pharmaceutical industry, and their consequences.

Patterns and Constraints of Drug Discovery in the Ayurvedic Industry. Innovation, Global Markets and Proprietary Medicines
Laurent Pordié (CNRS, Cermes3, Paris)

The numerous networks and ramifications involved in the making of therapeutic knowledge, practices and products make irrelevant many of the common assumptions about singlesited and one-dimensional origins of ‘ancient therapies’. This is all the more true with contemporary Ayurvedic proprietary medicines and the advent of reverse engineering. This paper will examine the many layers involved in the re-invention of Ayurveda by taking as examples three hepato-protective drugs created between 1955 and 2010 by The Himalaya Drug Company. A leader in the Ayurvedic industry established in 1930 in India, this firm has managed to put a number of innovative formulations on the market, to export itself in 82 countries, and to obtain approval and certifications from the stringent regulatory environments of Europe and North America. The Company has gradually mastered the art of designing new ‘traditional’ products that address the biomedically-defined disorders of a cosmopolitan clientele. What does this mean for an Ayurvedic industry? How to coordinate the enactments of various form of knowledge in both a research environment and a market where medical cultures collide? How are traditional formulas successfully reformulated for global consumption? This paper will offer a critical reflection on the genealogy of modern Ayurvedic formulations as they go across world sociopolitical borders, medical cultures, legal environments and ecosystems. Special attention will be given to the drives, the means and the constraints of Ayurvedic innovation in this context.

Globalising Kampo: The Possibilities and Limits to Translation in Global Markets
Maki Umemura (Cardiff University)

This paper explores the possibilities and limitations to the translation of Kampo medicine in the global pharmaceutical market. Kampo is a localised version of traditional Chinese medicine that is practiced in Japan. Along with folk remedies and patent medicines, Kampo is a Japanese traditional herbal medicine, which remains popular among Japanese people. The increasing popularity of Kampo medicines over recent decades may come as a surprise, given that Japan adopted Western scientific medicine in the late 19th century as its mainstream medicine. Unlike many of their Asian counterparts, when Japanese patients go to the doctor, they are treated under
the Western scientific system of medicine. In recent years, the acceleration of globalization and advancements in technology have triggered a dramatic transformation of the Western, science based prescription medicines industry. For Japanese firms engaged in scientific medicine, the global dispersion of the supply chain and the regulatory harmonization of pharmaceuticals have actually facilitated the global translation of scientific medicines developed in Japan. While these same forces have triggered recent efforts to translate Kampo medicine into the global market, they have met with mixed results. This paper will highlight the opportunities and the limitations to the internationalisation efforts of Kampo medicines.

Reformulation and the Cognitive Process of Translation
Francis Zimmermann (EHESS, Paris)

According to their catalogue of Ayurvedic medicines for sale on the internet, the Kottakkal Arya Vaidya Sala, a leading company based in Kerala (South India), are currently marketing 483 compound formulas, in the form of medicated oils, ghees, etc. For each preparation, the list, name, botanical identity and proportions of ingredients were fixed in the Sanskrit texts and furthermore legalized in 1978 (Ayurvedic Formulary of India, 1st ed.). Theoretically, about 500 different botanical species or varieties are involved; for practical reasons about 250 only are actually used. I study these pharmaceuticals, their composition, identity, forms of medication, and therapeutic indications, and I follow the threads of the transformation of about 50 of them into proprietary medicines reformulated for the global market. When a medicated ghee traditionally prescribed against skin ulcers is substituted with tablets against blood poisoning which are made up of broadly the same herbal ingredients, for example, I am recounting the cognitive process of translation that has occurred, a translation from the layman’s language of older days in the consultation room (Malayalam) into first the scholar’s language (Sanskrit) which was necessary for knowledge transmission, and eventually into the global market’s language (English).