An Interdisciplinary Journal

<http://www.netsoljournal.net/>

Volume 4, Issue 1, pp.40-42, Spring 2019

<https://doi.org/10.24819/netsol2019.04>

Date Submitted: May 5, 2019 **Date Accepted:** May 27, 2019

Book Review

Zohar Amar and Efraim Lev. *Arabian Drugs in Early Medieval Mediterranean Medicine*. Edinburgh: Edinburgh University Press, 2018.

Key Words: Medical history, Pharmacy, Medieval, Islam, Arab, Medicine

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Zohar Amar and Efraim Levy cover a rarely-touched topic on early medieval Arabic medicine. Although the title *Arabian Drugs in Early Medieval Mediterranean Medicine* suggests that the book primarily focuses on Arab medicine, by seeking the roots of Arab medicine the authors delve into the medical history of Arab neighbors from Greeks and Persians to Indians. By carefully examining the usage of various plants, herbs, and other remedies that originated from the Greek, Indian, and Persian societies, the authors seek to find how these societies contributed to the development of early medieval Arabic medicine. The book further traces the origins of pharmacology prior to the development of Arab medicine. Relying on an ancient Greek source, *materia medica*, a book of collected pharmacological knowledge, the authors find heavy Greek influence on the development of Arab medicine. *Materia medica* guided physicians to help their patients from the first century AD to the twentieth century and has been expanded over the centuries.

Arabian Drugs in Early Medieval Mediterranean Medicine is broken down into four chapters. After a brief narrative of Arab conquests, the authors focus on the Arab approach toward science in the first chapter. An encouraging and positive Islamic approach toward science made Islamic medicine influential for over a millennium from Spain to China. Being in a central location between the east and west, Muslim physicians gathered knowledge from all the civilizations with which Muslims interacted and harmonized and improved the knowledge in the center. Baghdad, the center of Abbasid Caliphate, served as the center of intercultural knowledge and dubbed as the House of Wisdom because of its embrace of scientific knowledge. Through the translations of ancient Greek texts into Arabic and embrace of Persian and Indian medical practices, Arab medicine incorporated different schools of thought and became a “melting pot” of various

approaches. The authors point out that after a rivalry of various schools, the Galenic school, which took its name from Greek physician Cladius Galenus (129-216 CE) whose works on anatomy, pharmacology, and surgery largely contributed to the medical knowledge, became a predominant one in the Islamic world. Succinctly, the authors posit that the influence of Greek medicine on Arab pharmacology surpassed the Indian and Persian influence. Furthermore, the chapter covers the trade routes and states that the merchants on along these routes traded more than commodities; they exchanged ideas on remedies and medicine as well. A skillful spice merchant equipped with knowledge of his merchandise's remedial powers could more effectively blend different spices and then market them more effectively. The Mediterranean Sea trade connected the Arab and European merchants and facilitated the spread of knowledge through cross-cultural fertilization. The results of this fertilization in the pharmacology was creation of Galeno-Arabic school on medicine.

In the second chapter, through a comparative study of Indian and Galeno-Arab pharmacology, authors challenge the "agricultural revolution" thesis of Canadian scholar Andrew M. Watson, outlined in Watson's *Agricultural Innovation in the Early Islamic World* (2008). In his work, Watson pointed out that Muslim trade and conquests brought eighteen different crops to the Middle East and triggered an agricultural revolution in the region (51). Crops such as sorghum, Asiatic rice and hard wheat, and sugarcane, cotton, and sour orange, lemon, and lime as well as banana, plantain, and coconut, and watermelon, spinach, and artichoke, along with colocasia (taro), eggplant, and mango were among the crops Watson listed. Amar and Lev point out that some of these plants did not originate from East Asia but from India and some of them had been cultivated in the region long before arrival of Islam. For example, they mention that the cultivation of rice, hard wheat, and watermelon in the Middle East predated Islam. They even provided evidence from Bible, which mentions watermelon.

The third chapter, 'Arabian' Substances, covers the medical substances used in Arab medicines. By placing the term 'Arabian' in quotation marks, authors indicated that they do not regard all these substances as Arabian. These substances ranged from cloves, tamarind, and turmeric to sandalwood, and jasmine, and included stones, such as diamond, corundum (rubies and safires), and bezoar-stone. Overall, authors described nearly one hundred substances used in medicine along with their origins and their medicinal use. Thirty-five images of these substances in the book make the understanding of the topic easier for novice readers.

In the final fourth chapter authors reiterate their earlier argument that the influence of Greek medicine was much more influential than the Indian influence on the development of medieval Arab medicine. To make their point more succinct, authors quote Muslim physician Al-Bīrūnī, who was familiar with both Indian and Greek science. In the quote Al-Bīrūnī states that in the east only Indian science can be comparable to Greek science but because Indians have a starkly different culture than Muslims, a dialogue is impossible. Indeed, exchange of ideas without direct communication is not very productive. The authors state that despite the dominance of the Galenic school on the Arab medicine, Indian, Persian and Babylonian influence were not totally eradicated. According to authors, Galenic predominance in the Abbasid period was largely theoretical, while the Indian medical influence was more at the practical level through the introduction of substances from India. Arabic classification of substances followed the Greek method rather than Indian. By

adding the Indian and Persian substances to the Galenic inventory, medieval Arab physicians created the Galeno-Arab medicine in the melting pot of House of Wisdom.

The rich bibliography includes primary and secondary sources in Arabic, Hebrew, English and French. An establishment of connection between medieval and contemporary medicinal remedies would have made the book more useful for wider readership. This research is significant as far as presenting the assimilation of medical knowledge and the cross-cultural connections as to how the knowledge was carried on through merchants and craftsmen. Overall, this interesting book contributes not only to the scholarship on the history of medicine in general and Arabic medicine more particularly, but also to environmental history through its challenge to Watson's "agricultural revolution" thesis.