CONFERENCE PAPER

The Medical Knowledge Network along the Silk Road during the Ilkhanate Era: Examining the Central Role of Iran (*Rabʿ-e Rashīdī*) and the Anatolian Corridor

Abstract

Documentary evidence demonstrates the medical knowledge network along the Silk Road during the Ilkhanate era (13th-14th centuries CE), highlighting Iran's central role through *Rabʿ-e Rashīdī* in Tabriz as the critical nexus connecting with the Anatolian Corridor. Through analysis of primary sources including the *Mukātabāt-i Rashīdī* correspondence, this research highlights how *Rashīd al-Dīn Fażl Allāh*, himself from a medical lineage, implemented strategies such as recruiting fifty physicians from diverse regions and establishing structured apprenticeship systems at *Dār al-Shafā* in *Muʿālijān*. These actions, contrary to prevailing assumptions, fostered unprecedented medical knowledge integration. Documentary evidence confirms how the western branch, enriched by Seljuk hospitals like *Ghīyāthiyya*, functioned as a specialized medical corridor where architectural similarities between Tabriz and Anatolian medical complexes reveal a shared template for education and practice. It demonstrates how deliberate governance by Iranian ministers of the Ilkhanate transformed these routes into integrated systems for transferring pharmacological materials and medical knowledge, fundamentally reshaping cross-cultural scientific exchange during this period, evidence that challenges the conventional narrative of Mongol-era scientific decline.

Key words: Silk Road, Persian Medicine, Knowledge Management, Interdisciplinary Communication, Medical Education

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Introduction

The Silk Road functioned not merely as a trade route but as a complex communicative network crucial for the exchange of knowledge, particularly in medicine. The Ilkhanate period (13th-14th centuries CE) marked the zenith of this intellectual exchange due to two unprecedented factors: first, political unity from China to the Mediterranean under Ilkhanid rule; second, erudite Persian viziers like *Rashīd al-Dīn Fażl Allāh*, himself from a medical lineage, who actively championed scientific advancement. The foundation of *Rabʿ-e Rashīdī* in Tabriz served as a global scientific hub. The strategic utilization of the Anatolian Corridor further exemplified the sophisticated management of this knowledge network.

However, while prior scholarship has addressed the general history of the Silk Road (Franck, 2004) and its nature during the Ilkhanate (Faraji Qarabagliu, and Ali-Mohammadnejad, 2021), and even explored the functions of Anatolian routes during the Seljuk period, none have specifically analyzed the medical function of this network or its governance mechanisms. Our study is an endeavor to address this gap by demonstrating how Iran and the Anatolian Corridor facilitated medical knowledge flourishing during this period.

Materials and Methods

This study employed a descriptive-analytical methodology based on systematic library research, utilizing a three-stage approach: first, identification and selection of primary historical sources including the *Mukātabāt-i Rashīdī* correspondence and the *Rabʿ-e Rashīdī* endowment deed; second, critical analysis of these sources with attention to historical context and authorship; third, synthesis of findings through comparative analysis with specialized academic literature on Ilkhanate-era medical networks.

Results and Discussion

Tabriz: The East-West Link of the Silk Road in the Ilkhanate Empire

The Silk Road formed a dynamic network connecting China to the Mediterranean, with routes evolving according to political and economic circumstances. Based on analysis of a research by Faraji Qarabagliu and Ali-Mohammadnejad (2021, p. 88), we traced how eastern trajectories of the medical knowledge network originated from the Dunhuang/Gansu region, progressing through Central Asian urban centers including Kashgar and Samarkand before converging at Merv, then proceeding through key Persian cities such as Nishapur, Ray, and Soltaniyeh to Tabriz. This strategic urban center functioned as the critical nexus where the trans-Asian route separated into five principal branches connecting to Mediterranean ports (Table 1). Tabriz consequently served as the essential interface between Eastern and Western communication systems, transforming into both a geographical and cultural focal point that enabled the redistribution of commodities, knowledge, and cultural influences across lands during Ilkhanate governance.

***Rabʿ-e Rashīdī*: Ilkhanid Tabriz's Center of Knowledge and Economy**

Recognizing the exceptional strategic importance of Tabriz, Rashīd al-Dīn Fażl Allāh established the world's premier international center encompassing religious, scientific, cultural, artistic, and economic activities. Scholars, scientists, artisans, and students from across the globe, including China, India, Iran, Africa, Byzantium, and the Levant, were attracted to this cosmopolitan hub.

Examination of the *Rabʿ-e Rashīdī* endowment deed correspondence (Hamadānī, 2001) confirms the complex was meticulously designed to achieve its multifaceted mission. The central compound featured a dome (*qubbah*), mausoleum (*rawḍah*), guesthouse (*dār al-ḍiyāfa*), hospital (*dār al-shifāʾ*), and Sufi monastery (*khānqāh*), surrounded by an extensive suburb named Rashidi. This suburb contained 24 caravanserais, numerous manufacturing facilities

for paper production and textile weaving, a mint (*dār al-ḍarb*), 1,500 shops, 30,000 luxurious residences, public baths, cultivated gardens, agricultural lands, and comprehensive urban infrastructure.

Table 1: Main branches and stations from Tabriz towards Mediterranean ports (Faraji Qarabagliu, and Ali-Mohammadnejad, 2021, p. 88)

Row	Main Route	Key Cities and Stations
1	Northwestern Branch	Tabriz → Marand → Khoy → Argish → Malazgird → Khunas → Erzurum → Trabzon
2	Western Branch (Via Kayseri)	Tabriz → Marand → Khoy → Argish → Malazgird → Khunas → Erzurum → Erzincan → Kayseri → Ayas Port
3	Western Branch (Via Sivas)	Tabriz → Marand → Khoy → Argish → Malazgird → Khunas → Erzurum → Erzincan → Aqshahr → Zara → Sivas → Ayas Port
4	Southwestern Branch	Tabriz → Ardabil → Tuman → Daran → Qarabagh → Banks of the Aras River → Banks of the Euphrates River → Sivas → Ayas Port
5	Southern Branch	Tabriz → Azerbaijan → Banks of the Aras River → Cities of Al-Jazira (e.g., Mosul) → Ayas Port

Rabʿ-e Rashīdī: Nexus Eastern and Western Medical Traditions

Rashīd al-Dīn Fażl Allāh created a highly organized administrative network through strategic placement of his fourteen sons in key governmental positions. The preserved Rashidi Correspondence (*Mukātabāt-i Rashīdī*) offers exceptional insight into this governance framework. Correspondence with his eldest son *Saʿd al-Dīn*, governor of *Qinnasrin* and *al-ʿAwaṣim*, detailed *Rabʿ-e Rashidi*'s medical facilities, noting the recruitment of fifty skilled physicians from India, China, Egypt, Syria, and other regions, each obligated to treat patients while training ten students. Ophthalmologists (*kaḥḥālūn*), surgeons (*jarrāḥūn*), and bonesetters (*mujabbirūn*) were required to train five apprentices each, establishing a formalized knowledge-transfer system. He accommodated them near the Dār al-Shafā, located in the neighborhood of The Healers (*Muʿālijān*) (Hamadānī, 1945, pp. 317–320). This intentional clustering of experts fostered daily interaction, directly catalyzing the integration of Eastern and Western medical traditions.

Notably, communication with his son *Jalāl al-Dīn*, governor of Rome (Anatolia), described establishing five new settlements around Tabriz, populating four with communities from Zanj, Georgia, and Abyssinia, while specifically requesting Anatolian inhabitants for the fifth settlement and asking for specific medicinal substances like lavender and dodder (Hamadānī, 1945, pp. 52, 93). This dual demographic and pharmacological strategy facilitated cross-cultural exchange within a structured environment.

The strategic positioning of this international medical complex in Tabriz, a Silk Road nexus, generated unprecedented conditions for medical progress by concentrating diverse medical traditions. This concentration was deliberate. While the eastern Silk Road route contained significant medical institutions, the western branch through Kayseri exhibited particularly advanced medical infrastructure with well-developed hospitals from the Seljuk period, such as *the Gawhar Nesibe Sultan* and *Ghīyāthiyya* in Kayseri, and *the Izzeddin Qaykavus* in Sivas, *the Turān Malak* in Divrigi, *Alāi*, and also the *ʿĀtik* in Konya (Bayat, 2006, pp. 4–7). *Rashīd al-Dīn*'s carefully managed administrative system connected Mediterranean regions with Central Asian and Persian medical centers, allowing this corridor to serve dual medical purposes: distributing pharmacological materials and transmitting medical knowledge.

Conclusion

This study demonstrates that the western route through Kayseri functioned as a specialized medical corridor within the broader Silk Road network. While all five branches served multiple purposes, the concentration of advanced medical institutions, including the *Ghīyāthiyya* Hospital in Kayseri and other Seljuk-era facilities, transformed this particular route into a privileged channel for pharmacological exchange and medical knowledge transfer. The presence of these renowned hospitals likely incentivized merchants to prioritize drug trading and scholarly exchange along this corridor, creating a self-reinforcing cycle of medical commerce and intellectual innovation.

This cross-pollination is exemplified by the architectural design of the *Rabʿ-e Rashīdī* in Tabriz. Its hospital-school-caravanserai complex, mirroring similar Anatolian models, reveals a shared template where the triad of education, treatment, and lodging for patients converged. As *Rashid al-Din*'s letters confirm, this direct exchange of medical knowledge was instrumental in forging the elevated, cohesive medical network centered at *Rabʿ-e Rashīdī*. Thus, the Ilkhanate period not only witnessed the integration of Eastern and Western medical traditions but also the emergence of specialized sub-networks where medical exchange became a dominant economic and intellectual driver, particularly along the Anatolian corridor.

This synergistic collaboration between Iranian intellectuals and Anatolian practitioners, facilitated through an integrated network and driven by deliberate demographic and pharmacological strategies, fundamentally shaped the development of medical knowledge during the Ilkhanate era. Contrary to conventional narratives, this period not only avoided decline but demonstrated advancement in medical knowledge through the construction of medical centers, the spread of medical knowledge to other educational institutions, and extensive scientific relations with other nations. These evidence challenges the traditional understanding of Mongol-era scientific development.

Authors' Contribution

The authors' contributions to this work are as follows: Maryam Mohseni Seifabadi: Conceptualization, Data Curation, and Formal Analysis. Mehrdad Karimi: Supervision, Project Administration, and Methodology. Zahra Taheri-Kharameh and Jamileh Khoshsourat: Data Collection, Investigation, and Formal Analysis. All authors read and approved the final version of the work.

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Conflict of Interest

None.

References

Bayat, A.H., 2006. Turkish medical history of the Seljuk era. *Foundation for Science, Technology and Civilization*, 61, pp. 1–14.

Faraji Qarabagliu, K. and Ali-Mohammadnejad, B., 2021. The nature of the Silk Road during the Ilkhanate era. *Medical History Journal*, 13, pp. 1–18. https://doi.org/10.22037/mhj.v13i46.34576

Franck, I.M., 2004. *The Silk Road: a history*. New York: Oxford University Press.

Hamadānī, R. al-D.F.A., 2001. *Vaqf-nāma-ye Rabʿ-e Rashīdī*. Tehran: Anjuman-i Āthār va Honar-i Melli.

Hamadānī, R. al-D.F.A., 1945. *Mukātabāt-i Rashīdī*. Lahore: Punjab Publications Inju National Press Lahore.