ORIGINAL ARTICLE

# Persian Pharmacological Knowledge among Armenians: Tracing the Armenian Translation of Hakim Shifai's *Qarabadin*



Hasmik Kirakosyan (Ph.D.)[1, 2]
Gayane Sahradyan (Ph.D. Candidate)[3]

1- Senior researcher, Matenadaran; The Mesrop Mashtots Institute of Ancient Manuscripts, Yerevan, Armenia
2- National Academy of Sciences of the Republic of Armenia; The Institute of Oriental Studies, Yerevan, Armenia
3- Assistant, Department of Pharmacy, Yerevan State Medical University, Yerevan, Armenia

**Correspondence:**
Gayane Sahradyan
Assistant, Department of Pharmacy, Yerevan State Medical University, Yerevan, Armenia

**e-mail:** gayanesahradyan11@gmail.com

**Abstract**
The development of Armenian medicine and pharmacology evolved through close interaction with both Greco-Roman, Persian, and Arabic medical traditions. Early Armenian medical manuscripts were composed in a form of vernacular Armenian that incorporated a significant number of Arabic, Persian, and Greek vocabulary. The scribes responsible for producing these texts—who were often practicing physicians and scholars—frequently cited their sources and explicitly described their works as translations. However, the strategies employed in these translations varied considerably, requiring careful and contextualized analysis to fully understand each text.
The primary aim of this study is to examine an Armenian transadaptation of Qarābādhīn-e Shifāʾī, a prominent 16th century Persian pharmacological compendium. The manuscript under investigation N372, produced in the 18th century, is preserved at the Matenadaran Institute of Ancient Manuscripts in Yerevan. Utilizing a descriptive-analytical methodology, this article explores both the translational approach adopted in this Armenian rendering of Shifāʾī's Qarābādhīn and its broader significance within the tradition of Armenian pharmacological literature.

**Key words:** Medicine, Manuscript, Transadaptation, Medieval, Scholarship

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## Introduction

The study of medieval Armenian medicine necessitates a thorough examination of its interactions with Greco-Roman and Islamic medical traditions. It is important to note that texts on Islamic medicine, composed primarily in Arabic, represented an eclectic synthesis of diverse traditions—including Greek, ancient Persian, and Indian medical knowledge—alongside elements from other less clearly identifiable systems (Brown, 1921, p. 65). However, from the 13th century onward, medical texts increasingly appeared in Persian, signaling a shift in the linguistic and cultural centers of medical scholarship (Elgood, 1979, pp. vii-viii).

The development of Armenian medical thought took shape within this broader intellectual and scientific landscape, becoming an integral component of Eastern medical traditions.[1] This is exemplified by the work of Amirdovlat Amasiatsi, a key figure in the history of Armenian medicine and one of its earliest scholarly representatives in the 15th century. In the preface to his influential treatise The Usefulness of Medicine Amirdovlat explicitly cites a wide array of medical authorities whose works—written in Arabic, Persian, and Greek—he consulted in composing his own text. These include:

- Bagarat or Bukrat[2] (the Armenian rendering of Hippocrates, 5th-4th century BCE),
- Geghianos (Claudius Galen, 157-216 CE),
- Archichanis or Archianis (Archigenes, 54-117 CE),
- Musayin or Masuayin ordi[3] (Yuhanna ibn Masawaih, d. 857),
- Rufos (Rufus of Ephesus, 1st century CE),
- Devchanis (Diogenes of Apollonia),
- Maseh (Abu Sahl al-Masihi Jurjani),
- Yunan or Honein (Hunayn ibn Ishaq, d. 873/77),
- Mahamat, Zakariayi ordi (Muhammad ibn Zakariyya Razi, d. 925),
- Sinayi ordi[4] (Avicenna, d. 1037),
- among others (Malkhasseants, 1940, p. 7).

This comprehensive list of sources underscores the extent to which Armenian medical scholarship was embedded in the wider scientific traditions of the medieval Islamic world, drawing upon foundational texts from Greek antiquity as well as contemporary Arabic and Persian sources.

Persian medical and pharmacological knowledge reached Armenian scholars via oral and written transmission. Armenian physicians not only translated Persian medical texts, but also adapted and synthesized them to suit local contexts.

1- For a summary of Armenian medical heritage see Vardanyan, 1999, 185-198; Vardanyan, 2007, pp. 15-27; Vardanyan, 2008, pp. 275-296.

2- The forms of writing taken from Armenian sources have been preserved in the article. The Armenian transliteration is done according to the Armenian Romanization Table, 2023 version (with minor font corrections to the 2022 version). (Armenian Romanization Table, 2023)

3- Literally, it means "son of Masawaih," cf. Armenian "ordi" meaning "son." Amirdovlat Amasiats'i rendered "ibn Masawaih" into Armenian in his literal sense.

4- Literally, it means "son of Sīnā," as "ibn Sīnā".

A notable example of this process is Manuscript no. 372, a handwritten pharmacopoeia preserved at the Matenadaran (the Institute of Ancient Manuscripts) in Yerevan.[5] At its core lies a translation of *Qarabadin* by Hakim Shifai[6], which constitutes the central focus of the present study.

**The Armenian tradaptation of Shifai's *Qarabadin*: Matenadaran Manuscript 372**

Matenadaran Manuscript 372 is an 18th century Armenian medical manuscript composed in 1758 by the physician Ghul-Hovhannes[7] in the city of Surat-Bandar[8], India. It was commissioned by Mr. Khrat, son of Ter Mkrtich Yeretsian of Tiflis (modern-day Tbilisi) and later came into the possession of Armenian Catholicos Yeprem (Ephraim)[9], who reportedly used it as a medical handbook. A marginal note in folio Aa attests to this, reading: "*Catholicos Yeprem*, *21* (*1821*), *October 26*."[10]

The manuscript is a pharmacological compendium of the *qarābāḏīn* genre—derived from the Greek term *graphidion* [*γραφίδιον*] (meaning "*booklet*")—and referred to in Armenian manuscript tradition as akhrabadin. It provides an extensive collection of medicinal recipes, organized in Armenian alphabetical order, and includes guidance on preparation methods, dosage, and therapeutic use.

In the colophon, the scribe Ghul-Hovhannes offers a theological invocation, requesting divine assistance for the successful completion of the work, which he mentions as a translation of *Qarabadin* Shafaei. He refers to himself as "*a sinful servant, a knowledgeable master, a lover of wisdom*," and underscores the breadth of the work—from individual ingredients to complex compound formulations—intended for practical use by fellow practitioners (Manuscript 372, 1758, f. 1a).

This manuscript is a partial translation and adaptation (or transadaptation) of the 16th century Persian pharmacological compendium Shifai's *Qarabadin* rendered into Armenian for a Christian Armenian readership. As the scribe notes, he acquired his medical education through instruction and reading in Persian, stating his motivation to transpose the text into Armenian:

"*This florid book became very dear to me, so I interpreted it in Armenian... First, I beseech you, benevolent and wise brothers, whoever reads this—if you encounter errors in transcription, words, or syllables, may you grant forgiveness, for the text was fully in Persian…*" (Manuscript 372, 1758, f. 136b)

5- See also a short reference written in Armenian about this manuscript: Sahradyan, 2024, pp. 188-207.

6- On Shifai's Qarabadin see Aghabeiglooei, et al., 2025, pp. 76-77.

7- In Armenian, the term Ghul (Ղուլ) traditionally signifies "slave," "servant," or "captive," as noted by Malkhasseants (1944, p. 188). Linguist Hrachya Acharean traces the etymology of Ghuli (Ղուլի) to the Turkish qulə and Eastern Turkic ġuli, both denoting a servant or slave—terms that could be applied to figures of sanctity or royalty. The personal name Ghuli appears in Armenian records as early as 1671 (Acharean, 1946, p. 148). However, within the Armenian cultural context, the term acquired a distinct and elevated connotation, referring to an individual "marked" or chosen by a saint—one whose destiny was perceived as sacred or divinely guided. This usage appears to draw on Iranian folk concepts of spiritual designation.

The broader etymological roots of the word are Arabic (cf. ghūl), where it refers to a monstrous, supernatural being. In Ottoman Turkish, the ghul is understood as a "man-eating beast" (Karapetean, 1912, p. 575), while in Iranian folklore, it is described as a malevolent nocturnal spirit. These ghuls are believed to attack solitary travelers at night, disorienting or killing them. One vivid folkloric account claims that if someone should sleep alone in a field, the ghul might lick their feet until they bled to death. Legends recount that when God hurled Satan's eavesdropping agents from the heavens, some became meteors, some fell into seas as marine monsters, and others turned into terrestrial ghuls. Descriptions of such entities portray them as part-human (above the waist) and part-animal (horse-like below), with donkey's ears. They are said to linger near meal gatherings, listening to human conversations. Female ghuls are often depicted as demonic forest-dwellers who torment their victims.

The Armenian rendering of the Shifai's *Qarabadin* is not a verbatim translation; rather, it incorporates multiple translation strategies—including literal (word-for-word), sense-for-sense, and rearranged translations—along with additions and interpretive modifications tailored to the linguistic, cultural, and religious context of Armenian Christian readership.

The manuscript also includes unique contributions by the Armenian scribe. For instance, an original entry not found in the Persian source reads:[11]

> *Ěnd yalvayi bē - srtin, ěstamon k'in ghuat' tay, st. t'azay kam ch'or sarkiviln tsetsē ghandōv. yep'ē, yeto a dram zafran, gulapōv atsē khaṛnē jēṛ pahē. khndzorin ēnēl veroy pēs, ban mti. Astuats ognë.*
>
> Quince Halva: Strengthens the heart and stomach. Preparation: Pound fresh or dried quince with sugar. Boil the mixture, then add 1 dram of saffron. Pour in rosewater, stir, and keep warm. The same can be done with apples. Take orally. God help [the patient]. (Manuscript 372, 1758, f. 10a)

Other entries closely mirror their Persian counterparts, demonstrating literal translation. One such example, titled Fluniay Farsi (Manuscript 372, 1758, f. 132b), mirrors a corresponding passage in Manuscript 204 of the Central Library of the University of Tehran (Manuscript 204, 1688, ff. 102-103):

> Fluniay farsi - *ōgti arnaber ghēin zavakatan uzh tay, k'amin vari, yarakhēn pirk pakhi, p'orn kapi ts'avērn tani, damaghn yistake, mitk'n banay, st. - flfl sefit, bazrōlbanj bb dram, afeun gēli makhtum zafran EE dram farfeun snbōl aghrgharay bb dram, jada a dram zutunbad, darunēj antsak margarit' mushk kēs kēs dram k'afur a kēs dank, aghay meghrov, majum shinē z amsēn yet tur a dram*.
>
> Persian Fluniay - This stops vomiting of blood regardless of the source, strengthens the uterus, expels uterine winds, protects the embryo, stops dysentery and vomiting, relieves pains, strengthens the brain, and enhances memory. Preparation [method]: white pepper and henbane seeds — 20 drams each, opium, mastic flower saffron — 5 drams each, euphorbia, spikenard, and pellitory — 2 drams each, castoreum — 1 dram, zarnabad doronic uncut pearl, mushk — ½ dram each, kafoor (camphor) — 1 and a half dang, crush, mix with honey and make a Majum aged for six months, then consume in a dose of one dram.

When captivated by a beautiful face, they pursue the individual obsessively (Hedayat, 1963, pp. 175-176). Protection against such beings is traditionally invoked through the utterance of Bismillah (Hedayat, 1963, p. 94).

In Iranian demonology, ghuls closely resemble dēvs—malevolent spirits both in function and in form (Asatrian, 1995, p. 29. On dēvs see: Asatrian or Asatryan?, 2013, pp. 9-25). Yet, Armenian folk tradition reinterprets the ghul in a markedly different manner. Rather than remaining a purely demonic figure, the ghul becomes sanctified through subjugation by a saint. These saintly ghuls bear physical signs—such as moles or distinctive bodily markings—that serve as indicators of their spiritual status. Armenian belief even holds that deeply devout individuals may attain the title "ghul of God," designating them as sacred servants. This conceptual evolution is further reflected in Armenian naming practices, suggesting the figure's enduring presence within the Armenian religious and cultural imagination.

8- "The important commercial port of Surat, located in Gujarat, the northern part of India's western coast, also attracted Armenian merchants since the late 16th century". About Armenians hub of Surat in India see Seth, 1992, pp. 225-292.

9- Ephraim I of Dzoragyugh served as Catholicos of All Armenians from 1809 to 1830. He was born in 1748 in Dzoragyugh, now part of the Yerevan area, and died in 1835 in St. Etchmiadzin.

10- For the colophons of the Manuscript 372 see Grand Catalogue of Armenian Manuscripts of Matenadaran, 2004, pp. 294-296.

11- We compared this with MS 204, the Persian text of Shifai's Qarabadin held in the Central Library of University of Tehran (written in 1100 ghamari).





فلونیای پارسی استفراغ خون از هر موضع که باشد باز دارد و رحم را قوت دهد و بادهای رحم دفع کند . محافظت جنین نماید و اسهال وقی باز دارد و دردها را بنشاند و دماغ را قوت دهد و حافظه زباد کند. صفت آن: فلفل سپید و بزرالبنج از هر یکی بیست درم، افیون و گل مختوم ده درم ،زعفران پنج درم ، فرفیون سنبل عاقرقرحا از هر یک دو درم ، جندبیدستر یک درم، زرنباد و درونج مروارید نا سفته مشک از هر یک نیمدرم کافور دانگی و نیم کوفته و پخته بعسل بسرشند و بعد از شش مال استغمال نمایند شربتی یک درم.

This entry illustrates the Armenian scribe's faithfulness to the Persian original in many sections.

The akhrabadin extensively incorporates Persian pharmacological terminology. Many of the Armenianized drug names are direct borrowings or calques via Persian, even when their ultimate origins are non-Persian (e.g., Greek or Arabic).[12]

Below is a selection of such terms found in Manuscript 372:

- *Aharich* [ահարիճ] (f. 1a) ← Pers. *ayārij*
- *Atrajfil* [ատրայֆիլ] (f. 2b) ← Pers. *atrafīl*
- *Gōlangamin* [գօլանգամին] (f. 3b) ← Pers. *gulangabīn*
- *Zaruri* [զարուրի] (f. 7b) ← Pers. *zarūr*
- *Ēragh* [էրաղ] (f. 8b) ← Pers. *ʿaraq*
- *T'riak'* [թրիաք] (f. 10b) ← Pers. *tiryāk*, <Gk. *thēriaká*
- *Majum* [մաջում] (f. 51b) ← Pers. *maʿjūn*
- *Murabay* [մուրաբայ] (f. 67a) ← Pers. *murabbā*
- *Mlkham* [մլխամ] (f. 71a) ← Pers. *malham*/*marham*.

In folio 136a, *Ghul-Hovhannes* formally concludes the first part of the manuscript, which he identifies as an Armenian adaptation-translation of *Qarābāḏīn-e Shifā'ī*. The manuscript thus stands as a testament to the cross-cultural transmission of medical knowledge in the early modern period, bridging Persian medical science with Armenian scholarly and religious traditions.

**On Substitute Remedies of Manuscript 372**

The second section of Matenadaran Manuscript 372 is dedicated to the topic of substitute remedies (*badal*), offering insight into pharmaceutical adaptations when original ingredients were unavailable. This portion is particularly notable for referencing the instruction (*nukhse*) of Father Joachim Capuchin and the counsel of Father Giuseppe, which constitutes compelling evidence of 18th century scientific exchange between Armenian medical practitioners and European—specifically French—medical knowledge, facilitated through the Capuchin Catholic missionary. A specific reference pertains to the operation of an alcohol distillation device—an in-

12- The manuscript also exhibits lexical and phonetic features characteristic of New Julfa Armenian dialect, which is beyond the scope of this paper.

novative technique in Armenian pharmacology—illustrated in Manuscript 372, f. 136a (see Figure 1 below).

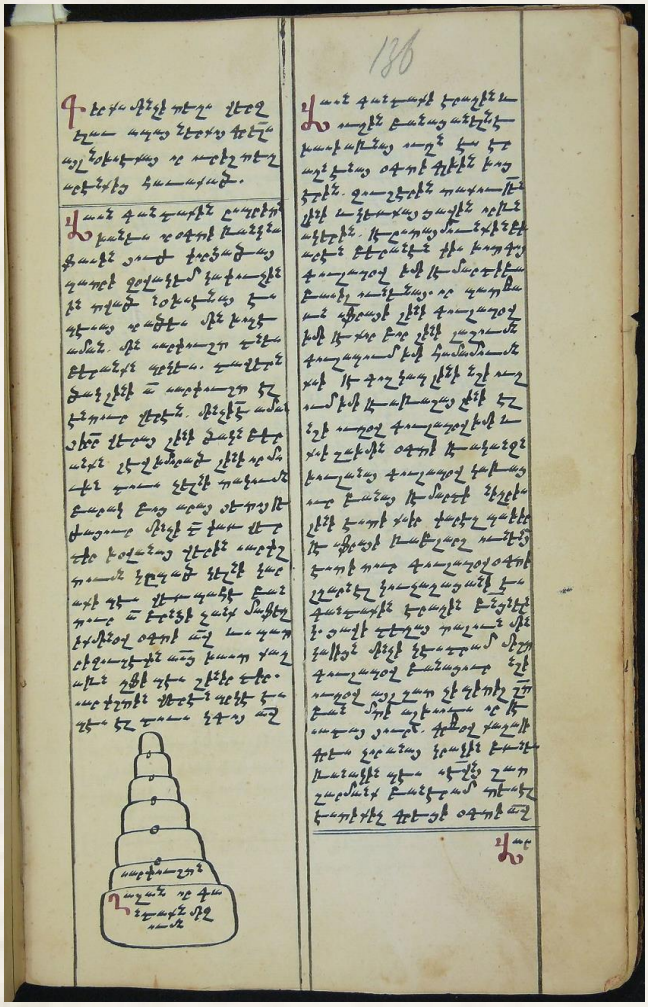


*Figure 1. An image of alcohol distillation device* (*Manuscript 372, 1758, Surat-Bandar, f. 136a*)

The concept of medicinal substitution was already well established within Armenian medical tradition and is thoroughly documented in this manuscript. The approach taken in Manuscript 372 directly reflects the influence of the Armenian physician Amirdovlat Amasiatsi, whose Akhrabadin includes detailed guidance on therapeutic substitutions. This continuity of tradition is explicitly acknowledged in the introduction to the section (f. 137a), which states:

"*I record the substitute drugs that master physicians have devised with wisdom, so that if one medicine cannot be found or is insufficient for its purpose, another may be used in its place—to ensure that the treatment's efficacy is fulfilled and not diminished*."[13]

13- Amirdovlat Amasiatsi was the first Armenian physician to systematically codify the practice of drug substitutions, creating a standardized framework. In Amasiatsi's Akhrabadin manuscript numbered 8871 (Manuscript 8871, 1459), the section on drug substitutions is written in Chapter 21, titled: "The Twenty-First Chapter, which Records the Substitute Drugs and their Uses: I record the substitute drugs that master physicians have established for this reason: so that through wisdom, if one medicine cannot be found for the required purpose and becomes scarce, they may use that substitute so that the treatment is fulfilled, nothing is lacking, the action is completed, and it gains efficacy." As we can observe, the introductory section of the substitute drugs chapter in Manuscript 372 bears verbatim similarities to the opening of the corresponding chapter in Amirdovlat Amasiatsi's 15th century work

In accordance with Amirdovlat's model, the list of original and substitute drugs in Manuscript 372 is arranged in Armenian alphabetical order (ff. 137a-138b). This systematic presentation underscores both the manuscript's pedagogical utility and the enduring significance of adaptive pharmacological strategies in Armenian medical literature.

**The Trilingual Persian-Arabic-Armenian Glossary of the Matenadaran Manuscript 372**

It was common practice in Armenian medical manuscript tradition to include multilingual glossaries—ranging from bilingual to even pentalingual formats—to clarify the nomenclature of medicinal substances. In this vein, Matenadaran Manuscript 372 (folios 144a-165a) preserves a particularly valuable example: a trilingual Persian-Arabic-Armenian glossary titled *Barġirk' Parsits'* ("*Persian Wordbook*"), compiled by the scribe himself.[14]

The preface to this glossary (f. 144a) offers critical insight into the compiler's linguistic methodology:

"*A Persian wordbook, interpreted in Arabic; as for Armenian—where no fixed Armenian term existed—I wrote* [*the term*] *in its worldly* [*colloquial*] *form*."

This statement reveals that in instances where a standardized Armenian equivalent was lacking, the scribe either retained the Arabic term or rendered it in a vernacular Armenian form, reflecting actual usage in 18th century Armenian medical discourse.

The glossary is organized with Persian headwords written in Armenian script, followed by Arabic and Armenian equivalents. In some cases, identical terms appear across all three languages, due either to the widespread adoption of a particular name or perhaps the scribe's limited access to alternative nomenclature.

Not all Armenian equivalents are consistently supplied. These occasional absences appear to result more from the compiler's inconsistency than from deliberate omission. For instance, in folio 154b, the Persian word *māst* ("yogurt") is listed without an Armenian translation:

Persian: *māst-* Arabic: *laban*, *ayamēsh-* Armenian: [*absent*]

The glossary contains 1,358 individual entries, arranged according to the Armenian alphabet. However, entries under the letters Ղ (*Gh*), Ի (*I*), Ճ (*Ch*), Յ (*Y*), Ռ (*Ṛ*), Ր (*R*), Ց (*Ts'*), and Ւ (*W*) are missing.

An explanatory note in folio 151a addresses orthographic challenges when transcribing Arabic or Persian phonemes

14- For a short analysis of the word-list of Manuscript 372 see Rushanyan, 1985a, pp. 43-44, Rushanyan 1985b, p. 189.

into Armenian. The scribe notes:

"*The words in chē - O brother, know that in Persian or Arabic, there was no word chē; it was jē* [*written with Ջ*], *and so it is written as jē*."

This observation reflects the linguistic negotiation required to transpose a trilingual lexicon into the Armenian phonetic system, highlighting the complexities of early modern Armenian medical transcription.

**Conclusion**

The analysis of Matenadaran Manuscript 372 demonstrates that 18th century Armenian medical manuscript culture, though significantly shaped by the intellectual currents of Persian science, simultaneously preserved and cultivated distinctive Armenian traditions. The scribe presents the work as a translation of the Persian Qarābādin-e Shifā'ī, but the structure and pharmacological organization of the manuscript more closely align with the 15th century Armenian pharmacological treatises of Amirdovlat Amasiatsi. This alignment suggests a deliberate integration of indigenous Armenian models within a broader framework of cross-cultural medical exchange.

The manuscript reflects a process of cultural and textual adaptation: Persian medical knowledge is selectively appropriated and reshaped to meet the expectations and needs of an Armenian Christian readership. Notable examples include the integration of Christian terminology, localized explanatory additions, and innovations such as the introduction of European-style distillation techniques into the Armenian pharmacological repertoire.

Rather than constituting a direct or mechanical translation, Matenadaran Manuscript 372 represents a dynamic act of transadaptaion and transformation. The scribe acts as a cultural mediator, negotiating between Persian sources and Armenian epistemologies, preserving core elements from Amirdovlat's pharmacognosy while inserting Christianized and locally resonant content. In this way, the manuscript exemplifies the adaptive and resilient nature of Armenian medical tradition—a tradition capable of assimilating Persian knowledge without losing its distinctive identity.

Furthermore, the inclusion of a multilingual glossary—particularly one that attempts to provide Armenian equivalents for Persian and Arabic drug names—illustrates a conscious effort to enhance the accessibility of medical knowledge for an Armenian-speaking audience. In doing so, Matenadaran Manuscript 372 not only preserves medical theory and practice, but also participates in a broader intellectual project of linguistic and cultural translation.



**Authors' Contribution**

Hasmik Kirakosyan conducted the historical, textual, and philological analysis of the Armenian medical manuscript, examined its Persian source, and contributed to the interpretation of its cultural and linguistic context. Gayane Sahradyan conducted the analysis of its medical content, identified and classified the pharmaceutical dosage forms, and examined its pharmacological aspects. Both authors contributed to the preparation of the article. All authors read and approved the final version of the work.

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**Conflict of Interest**

None.

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