



This work is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License.

## Theriac in the Persian Traditional Medicine

Ali Taghizadieh<sup>1</sup> , Reza Mohammadinasab<sup>2</sup> , Javad Ghazi-Sha'rbaf<sup>3</sup> , Spyros N. Michaleas<sup>4</sup> ,  
Dimitris Vrachatis<sup>5</sup> , Marianna Karamanou<sup>4</sup> 

### ABSTRACT

#### Cite this article as:

Taghizadieh A, Mohammadinasab R, Ghazi-Sha'rbaf J, Michaleas SN, Vrachatis D, Karamanou M. Theriac in the Persian Traditional Medicine. Erciyas Med J 2020; 42(2): 235-8.

Theriac is a term referring to medical compounds that were originally used by the Greeks from the first century A.D. to the nineteenth century. The term derived from ancient Greek *thēr* (θήρ), “wild animal”. Nicander of Colophon (2<sup>nd</sup> century BC) was the earliest known mention of Theriac in his work *Alexipharmaka* (Ἀλεξίφάρμακα), “drugs for protection”. During the era of King Mithridates VI of Pontus (132-63 BC), the universal antidote was known as *mithridatium* (μυθριδάτιο or *mithridatum* or *mithridaticum*) in acknowledgment of the compound's supposed inventor or at least best-known beneficiary. It contained around forty ingredients, such as opium, saffron, castor, myrrh, cinnamon and ginger. Theriac was not only used as an antidote from poisoning but also for various diseases, such as chronic cough, stomachache, asthma, chest pain, fever, colic, seizures, diarrhea, and retention of urine. The present study aims to collect and discuss the mentions of theriac in Persian medical texts.

**Keywords:** History, traditional medicine, pharmacy, toxicology

### INTRODUCTION

Since time immemorial, human beings have tried to discover or to create a universal antidote that could protect against all poisons, whether they were derived from plants, animals, or minerals. Such an antidote was a particular preoccupation of powerful rulers and the affluent; both groups were motivated by fear of poisoning and a desire somehow to purchase longevity. Among speakers of Arabic, the elusive elixir came to be referred to as a “*theriac*” (θηριακή), a word derived from ancient Greek *thēr* (θήρ), “wild animal” (1).

The earliest known mention of the subject in writing was by the ancient Greek poet Nicander of Colophon (2<sup>nd</sup> century BC) in his work *Alexipharmaka* (Ἀλεξίφάρμακα), meaning “drugs for protection” (Fig. 1). There is also a story from around Nicander's time regarding King Mithridates VI of Pontus (132–63 BC) and his closest followers attempting to commit suicide by poison after suffering defeat in the hands of the Romans. According to the story by the historians Cassius Dio and Appian, all of the people who took the drug died except the king himself, whose survival was attributed to his lifelong consumption of antidotes against the poisons of would-be assassins (in the event, he is said to have died by the sword) (2, 3). The writings of the most famous Roman physician, Galen (129–ca. 201), on the subject—which were more scientific than Nicander's if not more accurate—became a source for many medieval texts about poisons and antidotes. He and other writers referred to the universal antidote as *mithridatium* (μυθριδάτιο or *mithridatum* or *mithridaticum*) in acknowledgment of the compound's supposed inventor or at least best-known beneficiary (1). This study aims to collect and discuss the mentions of theriac in Persian medical texts.

### Theriac in Persian Medical Texts

In the 10<sup>th</sup> or 11<sup>th</sup> century Persian (specifically Zoroastrian) text *Arda Wiraz* (*Wiraz the Just*), the title character is given a concoction of wine and *Bang* (4) haoma (herb in preparation for a seven-day spiritual journey to heaven and hell and afterward receives an *anūsh khush* (“delicious antidote”) to counteract the effects of the initial dose. Also, while he is in heaven, Wiraz receives *anūsh* from “the souls of the deceased” that is described as an “elixir of eternity” and resembles in many ways the *ambrosia* consumed by the ancient Greek gods (5).

By the time the entire region adopted Islam, theriacs were part of a long-standing Persian medical tradition, and they were used by physicians (Fig. 2). Thus, Ali b. Sahl Rabban al-Tabari. (9<sup>th</sup> century), synthesized Greek, Persian and Indian medicine in a compendium called *Firdaws al-Hikma* the administration of theriacs for conditions involving the liver, kidney, and intestines, gout and colic, and to counteract a variety of poisons and infections resulting from animal bites were described (Fig. 3). Tabari's sole source regarding theriacs seems to have been Galen's work; however, he strongly advised against the use of theriacs, the effects of which on the young he com-

<sup>1</sup>Tuberculosis and Lung Diseases Research Center, Tabriz University of Medical Sciences, Tabriz, Iran

<sup>2</sup>Department of History of Medicine, Medical Philosophy and History Research Center, Tabriz University of Medical Sciences, Faculty of Traditional Medicine, Tabriz, Iran

<sup>3</sup>Department of Islamic History and Civilization, Faculty of Theology, Azarbaijan Shahid Madani University, Tabriz, Iran

<sup>4</sup>Department of History of Medicine and Medical Deontology, Medical School, University of Crete, Crete, Greece

<sup>5</sup>Department of Cardiology, General Hospital of Athens “G. Gennimatas”, Athens, Greece

Submitted  
08.02.2020

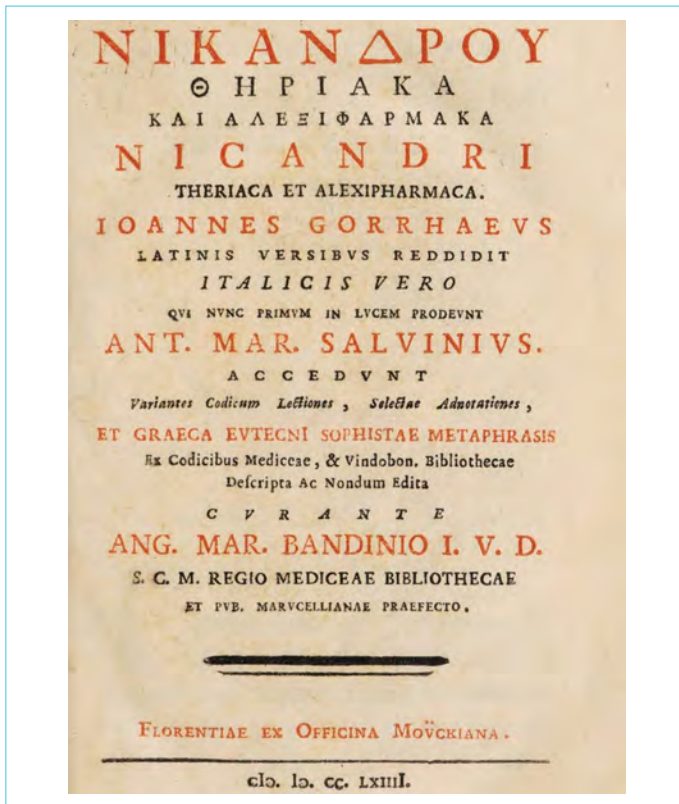
Accepted  
12.03.2020

Available Online Date  
31.03.2020

#### Correspondence

Marianna Karamanou,  
Department of Department  
of History of Medicine and  
Medical Deontology, Medical  
School, University of Crete,  
Crete, Greece  
Phone: +90 30-6973606804  
e-mail:  
mariannakaramanou@yahoo.  
com

©Copyright 2020 by Erciyas  
University Faculty of Medicine -  
Available online at  
www.erciyesmedj.com



**Figure 1. Nicander of Colophon “Theriaka and Alexipharmaka”; 1764**

Source: Wellcome Collection, London

pared to extinguishing their heat like a lamp running out of oil (6). Muhammad b. Zakaria al-Razi (854–925) also cited Galen, but, in this case, in support of the notion that a theriac may counteract snake venom and all other poisons (7). Also, writing at about this time, Abū Abdallah Khwarazmi noted the Greek origin of the term, and Abū Rayhan Birūni (973–1050) made many references to the properties and types of theriacs, which he described as *tiryāq fārūq*, “that which saves” or “that which abstracts poison from the body” (8, 9).

Avicenna (as he is known in the West; ca. 980–1037) again traced theriacs back to King Mithridates but identified as the best method for producing them the one practiced by Andromachus the Elder of Crete, physician to the Roman Emperor Nero (reigned 55–68 CE). “Many physicians have tried to add ingredients to or remove ingredients from the *fārūq*, which was the only way left for them,” Avicenna stated in his *Canon of Medicine* (*al-Qānūn fī al-Tibb*), asking, “Do you know the reasoning behind their manipulation of the formula? (Fig. 4) Simply to go down in history and be honored for playing a part in the making of *fārūq*. They wanted to be as well known as Andromachus.” Avicenna appears to have been of the opinion that the theriac proved effective in counteracting poisons and healing many diseases; the maladies for which he prescribed it included chronic cough, stomach ache, asthma, chest pain, fever, colic, seizures, diarrhea, and retention of urine (10). His contemporary Muhammad ibn Sa’id al-Tamimi (d. 990) wrote three separate monographs on theriacs and even created one of his own consisting of sixty-six basic drugs in addition to honey and wine that, he claimed, protected against the venom of all snakes and scorpions (11, 12).



**Figure 2. Preparation of theriac in the presence of a physician; 16<sup>th</sup> century**

Source: Wellcome Collection, London

In the following century, in the eastern Muslim world, Ismail Jurjāni (1041–1136) repeatedly referred to various types of theriacs and their medical properties. In *Zakhira Khwarazmshahi* (literally, *Treasure Dedicated to the King of Khwarazm*), for instance, he described theriacs as having the power to treat various poisons, to cure seizures, nausea, toothache, parasites, and urination problems, and to prevent winter illnesses among the elderly, as well as leprosy (13). Jurjani included a story from his own clinical experience of a man whose bleeding larynx was supposedly cured by the administration of a theriac (14). Like many medical writers of the period, he served the king; Abu al-‘Ala Ibn Zuhr (1094–1162), on the opposite side of the Muslim world, wrote of making a theriac for the ruler of al-Andalus that included saffron (15). Somewhat later, in 1360, a presumably Jewish physician working in Cairo, al-‘Attar Haruni al-Israili, described, in a volume on pharmacy titled *Minhaj al-Dukkan wa-Dustur al-A‘yan* (*The Management of the [Pharmacist’s] Shop and Preparation of Useful Medicines*), a new theriac consisting of 86 components. This mixture, he claimed, when dissolved in water and taken with honey, counteracted poisons, as well as treating respiratory, chest and stomach conditions, chest pains in the chest, and colic (16).

In the following centuries, theriacs continued to receive considerable attention in Persian books on medicine and pharmacology of the Safavid era. Many scholars wrote about *fārūq*, such as Kamaladdin Hasan Shirazi, who, in a work that appeared in 1563,





## CONCLUSION

The copious references to various universal antidotes and panaceas in the mythology, as well as the healing traditions of many people, attest to the universal desire for protection against the many compounds that may disrupt the normal functioning of the human body. In their search for these drugs, Muslim physicians, not least Persian physicians, were heirs to the medical traditions of ancient Greek and Rome on the one hand and of ancient Persian on the other, with the former being dominant. Thus, the mentions of antidotes in Persian scholarly and mythological texts of the medieval period all build on or are in some way informed by ancient Greek writers. Starting near the beginning of the Islamic era, physicians and pharmacologists strived for the better part of a millennium to develop an effective theriac by changing the many ingredients that went into these concoctions and their proportions or the methods by which they were produced. Many Persian writers of the era spoke of the astonishing effects of various types of theriacs—which is a topic deserving of more extensive research. Supported by the great authority accorded to Greek medicine in both the Muslim world and Europe, the belief that theriacs could protect individuals from poisons and various maladies persisted well into the modern era, only gradually being dispelled by the progress of the Western medicine founded on scientific principles (27).

**Peer-review:** Externally peer-reviewed.

**Author Contributions:** Concept – AT, RM, JGS, SNM, DV, MK; Design – AT, RM, JGS, SNM, DV, MK; Supervision – AT, RM, JGS, SNM, DV, MK; Analysis and/or Interpretation – MK; Literature Search – MK, SNM, RM; Writing – MK, SNM, RM; Critical Reviews – AT, RM, JGS, SNM, DV, MK.

**Conflict of Interest:** There is no conflict of interest in this study.

**Financial Disclosure:** The authors declared that this study has received no financial support.

## REFERENCES

1. Karaberopoulos D, Karamanou M, Androustos G. The theriac in antiquity. *The Lancet* 2012; 379(9830): 1942–3. [CrossRef]
2. Touwaide A. Nicander, Thêriaka, and Alexipharmaka: Venoms, Poisons, and Literature. Wexler P, editor. *Toxicology in Antiquity*. London: Academic Press; 2019.p.105–15. [CrossRef]
3. Mayor A. Mithridates of Pontus and his universal antidote. Wexler P, editor. *Toxicology in Antiquity*. London: Academic Press; 2019.p.161–74. [CrossRef]
4. Gnoli G. BANG. Yarshater E, editor. *Encyclopædia Iranica*, 3<sup>rd</sup> Vol. Fasc. 7. New York: Encyclopaedia Iranica Foundation; 1988.p.689–91.
5. Alam H. Pad Zahr [Expelling poison]. Haddad-Adel AG, editor. *Encyclopedia of the World of Islam*. 5<sup>th</sup> Vol. Tehran: Encyclopaedia Islamica Foundation; 1999.p.349.
6. Rabban al-Tabari A. Firdausu'l-Hikmat [Paradise of wisdom]. Berlin: Buch-und Kunstr; 1928.
7. Razi A. Mansuri Fi Al-Tibb [The Book of Medicine for Mansur]. Kuwait: Institute of Arab Manuscripts, Arab League Educational Cultural and Scientific Organization; 1987.p.316–8.
8. Kharazmi M. Mafatih al-ulum [Keys to the Sciences]. Correction Aasam A. Beirut: Dar al-Manhel; 2008.
9. Bīrūnī AR. Kitāb al-saydana fi al-tibb. Teharn; 2004. [Article in Persian].
10. Sina I. Al-qanoon fi al-teb. Beirut, Lebanon: American University of Beirut; 2005.p.43–99, 202–49. [Article in Arabic].
11. Tamimi MiSi. Māddat-ul-Baqā' fi Iṣlāḥ Fasad il-Ḥawā w-al-taharruz min Ḍarar-il-Awbā. Cairo: Maahd Makhṭot al- Arabia; 1999. [Article in Arabic].
12. Usayabeh IA. Uyun al-Anba' fi Tabaqat al-Ateba [Books about physicians' biographies and physician classification]. Translated by Ghazban SJ and Najmabadi M. Vol. 1. Tehran: Tehran University Publication; 2001.p.201, 335.
13. Tsoucalas G, Spengos K, Panayiotakopoulos G, Papaioannou T, Karamanou M. Epilepsy, Theories and Treatment Inside Corpus Hippocraticum. *Curr Pharm Des* 2017; 23(42): 6369–72. [CrossRef]
14. Jorjani E. Zakhireye Kharazmshahi. Qom: Ehya-e Tebb-e Tabiee Institution; 2012. [Article in Persian].
15. Zuhri I. Kitāb al-Taysir fi al-Mudawat wa-'l-Tadbir [Book of Simplification Concerning Therapeutics and Diet]. Al-Khoori M, editor. 1<sup>st</sup> ed., vol. 1 and 2. Damascus: Darul Fikr Press for the Arab Educational Scientific and Cultural Organization; 1983.
16. Israeli A. Minhaj Al-dakan va Dastor Al-ayan fi Amal va tarakib Al-Adwiya Al-nafe-eh Alabdan [The store guide and Pharmacopoeia constitution]. Tehran, Iran: University of Medical Sciences, Mossaseyeh Motaleate tarikhe pezeshti, Tebe Islami va Mokamel; 2004.
17. Shirazi KAd. Teariq Al Faroq [Theriac separator], Tehran: Library, Museum and Document Center of Iran Parliament; 2007.
18. Yazdi MNad. Tofeh Shaheyyeh Abasseyyeh [Translation and description of the resale of Imam Reza]. Qom: Bavardaran; 2001.
19. Hossaini-Tabib M. Tohfe of Hakim Momen [Rarity of the faithful]. Qom: Mostafavi Press; 1959.
20. Meydenbach J. Hortus sanitatis [The Garden of Health]. Mainz; 1491.
21. Elgood C. Safavid medical practice or The practice of medicine, surgery and gynaecology in Persia between 1500 A.D. and 1750 A.D. London: Luzac; 1970. [CrossRef]
22. Berman A. The Persistence of Theriac in France. *Pharmacy in History* 1970; 12(1): 5–12.
23. Aghili Khorasani MH. Kholasat al-Hikmah [Summary of wisdom]. Qom: Esmaelian Publications; 2006.
24. Aghili Khorasani MH. Qarabadin-e Kabir [The Big Book of composed drugs]. Tehran: Mahmoudi Publications; 1999.
25. Hamedani A. Ehya-Al-Atfal Mozaffari [Mozaffari's Pediatric Revival]. Tehran: Tehran University of Medical Sciences; 2003.
26. Nasser Al-Hokama A. Hifz-e Sehat [Health Preservation]. Tehran: Al-Mui Publishing; 2008.
27. Laios K, Tsoucalas G, Vrachatis DA, Charalampakis A, Androustos G, Karamanou M. Are Drugs Always the Proper Solution to Therapeutic Dilemmas? Non-drug Approaches to the Post-traumatic Stress “Waking Corpse” Syndrome. *Curr Pharm Des* 2019; 25(1): 1–4. [CrossRef]