

Research article

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On the Properties and Benefits of Coffee: Attributed to Muḥammad Badr al-Dīn al-Qūṣūnī

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Abstract: This article presents a critical edition and analysis of a short 16th-century medical treatise entitled *Fī bayān aḥwāl al-qaḥwa wa-ḥāṣṣiyyatihā wa-manāfi‘ihā*, attributed to the Ottoman court physician Muḥammad Badr al-Dīn al-Qūṣūnī. The base manuscript, preserved in Leiden University Libraries as Or. 945:16 (fol. 58r), is collated against two later versions: Ragıb Paşa, K. No. 1482, ff. 56 r–56 v, and *al-Nūr al-sāfir ‘an aḥbār al-qarn al-‘āšir*. The treatise, which adopts a question-and-answer format to examine the properties and medicinal benefits of *qaḥwa*, ‘coffee’, offers insights into the role of coffee in early Ottoman medical discourse and into the adaptation of Galenic humoral theory to a new substance.

Keywords: Arabic, history of medicine, coffee, Muḥammad Badr al-Dīn al-Qūṣūnī

Introduction

Muḥammad Badr al-Dīn al-Qūṣūnī (fl. 926–984/1520–1574) served as court physician to the Ottoman Sultan Süleymān I (r. 926–974/1520–1566) and his successor Selīm II (r. 974–982/1566–1574).¹ The treatise presented here, dated to 974 /1566,² may have been one of the last works that al-Qūṣūnī prepared for Sultan Süleymān I, whose death in the same year marked a turning point in Ottoman rule with the accession of Selīm II. However, al-Qūṣūnī remained in his role as court physician until the end of Selīm II’s reign in 982/1574.³

Apart from the treatise on coffee, al-Qūṣūnī’s notable works include *Kitāb zād al-masīr fī ‘ilāğ al-bawāsīr*, ‘The Book of Provisions for the Journey on the Treatment of Haemorrhoids’, a treatise on treating haemorrhoids,⁴ *Kitāb kamāl al-farḥa fī daf‘ al-sumūm wa-hifz al-ṣiḥḥa*, ‘The Book of the Perfection of Joy in Repelling Poisons and the Preservation of Health’, a guide to poisons dedicated to the Mamluk Sultan Abū al-Naṣr Qānṣūḥ al-Ġūrī (r. 906–922/1500–1516),⁵ and *Maqāla fī ḡawāz isti‘māl ḥaḡar al-bādazahr al-ḥayawānī*, ‘Treatise on the Permissibility of Using the Animal Bezoar

1 Ullmann, *Die Medizin im Islam*, pp. 180–181; Witkam, J. J., *Inventory of the Oriental Manuscripts of the Library of the University of Leiden*, Vol. 2, p. 403. Brockelmann (p. 666) records his name as Muḥammad ibn Muḥammad al-Qawṣūnī Badr al-Dīn (Qīṣūnizāde), while Ullmann (p. 180) omits Badr al-Dīn. The variation in the spelling of al-Qūṣūnī vs. al-Qawṣūnī likely stems from differing vocalisations, but the name appears to derive from Qūṣ, a medieval trade centre in Upper Egypt. Once a flourishing city, Qūṣ declined during the Ottoman period following the rise of new sea routes (Makris, *Qus*, pp. 800–801). The manuscript under examination reads ‘Muḥammad Badr al-Dīn al-Qūṣūnī’, a form also attested in the *Encyclopaedia of Islam* (Vol 4, p. 452) and is signed by him.

2 However, this may alternatively be the date of the copyist, not of the original treatise. A more thorough discussion on the date follows.

3 Ullmann, *Die Medizin im Islam*, pp. 180–181.

4 Ullmann, *Die Medizin im Islam*, p. 181.

5 Ullmann, *Die Medizin im Islam*, p. 341.

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Stone', which discusses the medicinal use of animal bezoar.⁶ Several other titles related to medicine and bathing that are attributed to Muḥammad Badr al-Dīn al-Qūṣūnī can be found in the al-Furqan Digital Library.⁷ Some of these sources identify him as Muḥammad Šams al-Dīn ibn Badr al-Dīn al-Qūṣūnī, raising questions about whether these references point to his son or involve a conflation of authorship. Brockelmann mentions that the article on bathing, *Maqāla fī l-ḥammām*, is said to have been written by his son.⁸ The overlapping titles suggest that further research is needed to determine if they refer to one person or several family members. However, the attribution of *Fī bayān aḥwāl al-qahwa wa-ḥāṣṣiyatihā wa-manāfi'ihā* to Muḥammad Badr al-Dīn al-Qūṣūnī is unquestioned.

Coffee in context

Identifying the history and role of coffee in the Arab world remains challenging due to the retrospective nature of early accounts. Hattox (1985) and van Arendonk (1990) note that the earliest reliable text discussing coffee is attributed to 'Abd al-Qādir al-Ġazīrī and dates to 996/1587–8.⁹ In this treatise, al-Ġazīrī discusses the etymology, history, and properties of coffee, as well as the religious disputes it caused in Mecca. He also presents a collection of verses in praise of coffee.¹⁰ According to van Arendonk, coffee was already known in Yemen by the 9th/15th century, from where it was introduced to Cairo at the beginning of the 10th/16th century. It became particularly popular among Sufi communities, who valued its stimulating effect for devotional practices.¹¹ While these retrospective accounts suggest that coffee drinking may have begun earlier, the scarcity of contemporary sources means that any specific date or figure associated with its introduction should be treated with caution. Moreover, while legal texts, travel accounts, and treatises address the permissibility of coffee,¹² al-Qūṣūnī's work represents an early medical perspective on the beverage.

Tannahill (1989) suggests that the cultivation of wild coffee (*Coffea arabica*) may have begun in Ethiopia as early as the 6th century AD. Initially, it was consumed by chewing the berries or grinding them into a paste, which was later prepared as a tisane. It was not until the 13th century AD that the beans were cleaned, roasted, and brewed to make the beverage we recognise today as coffee.¹³ Hattox (1985) notes that by the time coffee houses emerged in the Middle East, coffee was primarily consumed as a drink, although some reports indicate that the berries were still eaten. Different terms are used to distinguish its parts: *bunn* refers to the berry, sometimes specifically to its kernel; *qiṣr* denotes the husk; and *qahwa* refers to the brewed beverage.¹⁴

6 Ullmann, *Die Medizin im Islam*, p. 341.

7 <https://digitallibrary.al-furqan.com>.

8 Brockelmann, *Geschichte der Arabischen Litteratur II*, p. 666.

9 Hattox, *Coffee and Coffeehouses*, pp. 13–14; Van Arendonk, *Qahwa*, p. 449. Al-Ġazīrī's treatise is partly translated into French in de Sacy, *Chrestomathie arabe*.

10 Ellis, *The Coffee House*, p. 15.

11 Van Arendonk, *Qahwa*, p. 449.

12 Hattox, *Coffee and Coffeehouses*, pp. 8–10.

13 Tannahill, *Food in History*, p. 274.

14 Hattox, *Coffee and Coffeehouses*, pp. 16–17. The use of the husk was also noted outside its region of origin. For example, an early anonymous English source from 1682 observes that 'Asiatic nations' prepared their coffee using the husk, considering it to be stronger and more efficacious than the berry itself and to allow for a smaller quantity to be consumed. In contrast, Europeans removed the husk, roasted the berries, and ground them into a powder before brewing (*The Natural History of Coffee, Thee, Chocolate, Tobacco in Four Several Sections*, pp. 6–7). The consumption of *qiṣr* as a beverage is not merely a historical practice; it remains popular in Yemen today. As a by-product of coffee production, *qiṣr* is more affordable than coffee itself and is valued in Yemen for its perceived health benefits and accessibility. It is typically prepared by boiling the husks with spices such as ginger, cardamom, and cloves, making it a distinctive part of Yemeni culinary tradition (Al-Najjar, A, Dijkxhoorn, Y, Zubiry, R & Ruben, R 2023, *Understanding Coffee Caring Practices and Prospects in Yemen: Case Study from Bani Matar*).

Some scholars, such as Nasrallah (2010),¹⁵ Figuiet (1876),¹⁶ and Toussaint-Samat (2009),¹⁷ suggest that coffee (*bunn*) was used as early as the 9th century AD and appears in the works of the 9th- and 10th-century AD physicians al-Rāzī and Ibn Sīnā. However, this identification may stem from a confusion between coffee and another aromatic substance, *bunk*. For example, Toussaint-Samat (2009) suggests that *qahwa* was previously called *bunk*,¹⁸ and Nasrallah (2010) notes that *bunk* later came to be known as *bunn*.¹⁹ The term *bunk* does feature in al-Rāzī's *al-Kitāb al-Ḥāwī*²⁰ and Ibn Sīnā's *al-Qānūn fī l-Ṭibb*, yet the latter expresses uncertainty, merely describing it as 'something' imported from India and Yemen, and noting that some sources equate it with *umm ḡaylān*,²¹ i.e., various species of acacia.²² This is consistent with the classification by the early Abbasid physician Ibn Māsawayh (d. 857), who lists *bunk* under the category of *afāwīh* (aromatic substances) and describes it as specifically intended for use in perfumes.²³ Furthermore, as Nasrallah (2010) suggests, the earliest documented use of *bunk* – as noted in al-Warrāq's recipes from the 10th century AD – was not as a beverage, but as a toasted component in hand-washing preparations and fumigating blends, suggesting that its primary function was as an aromatic.²⁴ Perhaps the most validating source is that of the 16th-century AD physician al-Anṭākī, who describes *bunk* as the light, yellow husk of Yemeni *umm ḡaylān*, and details the properties of *bunn* (coffee berry) right after *bunk* in his *Taḍkirat ūlī al-albāb*, thereby making a clear distinction between the two substances.²⁵ Given the evidence against an early identification – including the lack of its explicit use as a beverage, the consistent aromatic context, the reference to acacia, and the later distinction made by al-Anṭākī – it is more probable that *bunk* was a distinct medicinal or aromatic substance.

While the existence of *bunk* does not validate a 9th-century date for coffee's use as a beverage, the well-attested history of coffee begins to solidify in the 15th century AD, when the substance is consistently referred to as *bunn* or *qahwa* and consumed as a beverage. By the mid-15th century, coffee had gained popularity in the Arab world, spreading from Aden to major cities like Mecca, Cairo, Damascus, and Aleppo.²⁶ Later, this growth was further facilitated by the Ottoman establishment of control over Yemen and key Red Sea ports such as Suakin, Massawa, and Ḡidda in 1525 – a dominance that lasted until the early 17th century.²⁷ Following these developments, coffee reached Istanbul, where the first coffee house was established in 1554²⁸ by two men from Damascus and Aleppo.²⁹ Following this, the number of such establishments increased rapidly.³⁰ From the very beginning, cof-

15 Nasrallah, *Annals of the Caliphs' Kitchens*, p. 766.

16 Figuiet, *Le savant du foyer*, p. 451.

17 Toussaint-Samat, *A History of Food*, p. 521.

18 Toussaint-Samat, *A History of Food*, p. 521. The term is spelled as *bunc* in the cited source.

19 Nasrallah, *Annals of the Caliphs' Kitchens*, p. 766.

20 Al-Rāzī, *al-Kitāb al-Ḥāwī*, p. 2343; 2915.

21 Avicenna, *al-Qānūn fī l-Ṭibb*, p. 394.

22 Ibn Ḡanāḥ, *On the Nomenclature of Medicinal Drugs II*, pp. 1084–1085.

23 Ibn Māsawayh, *Traité sur les substances simples aromatiques par Yohanna ben Massawāih*, p. 6; 23.

24 Nasrallah, *Annals of the Caliphs' Kitchens*, p. 766.

25 Al-Anṭākī, *Taḍkirat ūlī al-albāb*, I, p. 75. Al-Anṭākī describes *bunk* as a yellow husk from Yemen with an astringent taste and an aromatic smell. In Yemen, it is said to be the husk of *umm ḡaylān*. According to him, its temperament is either hot or cold, and dry in the first degree. It strengthens the cold brain and stomach, purifies the body, removes foul-smelling sweat, arouses desire, cuts off bilious diarrhoea and nausea, is beneficial for the spleen, and has a diuretic property. He also mentions that its heavy, white type is of poor quality, since it weakens the liver. If taken, its negative effects can be counteracted by taking jujube. This can be substituted by myrtle. (My translation.) As for coffee, al-Anṭākī's description follows later in the introduction of the current article.

26 Tannahill, *Food in History*, p. 274.

27 Tagliacozzo, Siu & Perdue, *Asia Inside Out: Changing Times*, p. 114.

28 Tannahill, *Food in History*, p. 274.

29 Ellis, *The Coffee House*, p. 12; al-Kurdī, *Adabiyyāt*, p. 13.

30 Van Arendonk, *Qahwa*, p. 451.

fee was renowned for its ‘heart-stimulating’ effect, which, besides helping its consumer stay awake, prevents headaches and aids digestion, especially when consumed an hour after food intake.³¹ As coffee consumption increased, it became both a valuable commodity and a subject of social, legal, and literary debates across the Islamic world.³² Early legal opinions on coffee date to as early as 1438 AD in Aden, and another document suggests that coffee was consumed in Mecca by the end of the 15th century AD.³³

Within a short span of time, the social and religious aspects of coffee houses drew opposition. These new establishments emerged as social hubs where men and women gathered to drink coffee, listen to music, dance, play games such as chess or backgammon, and gamble.³⁴ Consequently, coffee houses attracted the attention of the authorities, as they bore similarities to banned wine taverns.³⁵ The first recorded opposition to coffee occurred in Mecca in 917 H. (1511 AD), when two Persian brothers, Ḥakīmāni, who were skilled in logic and rhetoric and had some medical knowledge, argued that the coffee plant was harmful to health.³⁶ Consequently, religious leaders, who viewed coffee houses as rival social spaces that drew people away from places of worship, unanimously agreed to forbid coffee, placing it under the same prohibition as alcohol.³⁷ This new public sphere contradicted the established order of Orthodox Islam, i.e., the Sunni interpretation of Islam, among the 16th- and 17th-century Ottomans. The two main powers – the Sultan as the head of the state, and the *ṣeyhülislam*, as the chief religious authority – worked in alliance to control this phenomenon through their respective means. The sultan issued decrees, while the *ṣeyhülislam* issued *fatwas*, i.e., declarations. The fact that decrees were sent to governors in Bursa, Istanbul, and Jerusalem demonstrates that coffee house activities were widely perceived as contrary to Orthodox Islam.³⁸

While Orthodox Islam provided arguments against coffee, Sufism attempted to legitimise it across all levels of society. Apart from the question of whether coffee should be permitted, its impact on health was also debated, with consumers, traders, and government officials voicing their opinions for or against its legitimisation.³⁹ These debates intensified in cities such as Istanbul and Cairo, sometimes leading to raids on coffee houses and riots, reflecting the significance of coffee in early modern society.⁴⁰ According to al-Ġazirī, those who regarded coffee as a permissible beverage mentioned its positive effect of promoting cheerfulness and facilitating religious worship, while its opponents pointed to its similarity to wine, and therefore considered it harmful to both the mind and the body.⁴¹ Some argued that its stimulating effects violated Islamic law and posed health risks, while others objected to the roasting of coffee beans or rejected it outright simply because it was an innovation. Early coffee houses also became platforms for political discussions, raising concerns among the ruling elite. Officials responsible for controlling public morality even viewed coffee houses as breeding grounds for immoral activities, such as gambling and unorthodox social and sexual interactions.⁴² For example, in 950 H. (ca. 1543 AD), Sultan Süleymān I sent an order to Mecca forbidding merchants from trading in coffee, effectively banning coffee houses. Initially, the order was obeyed, but soon after coffee was again being consumed in public, more coffee houses were being established, and the

31 Al-Kurdī, *Adabiyyāt*, p. 30.

32 Hattox, *Coffee and Coffeehouses*, pp. 3–4.

33 Ellis, *The Coffee House*, p. 14.

34 Al-Ġazirī, *Umdat al-ṣafwa fi ḥill al-qahwa*, pp. 247–248; Ellis, *The Coffee House*, p. 14.

35 Ellis, *The Coffee House*, p. 14.

36 Al-Ġazirī, *Umdat al-ṣafwa fi ḥill al-qahwa*, p. 236; Robinson, *The Early History of Coffeehouses in England*, pp. 23–24.

37 Al-Kurdī, *Adabiyyāt*, p. 13.

38 Karababa & Ger, *Early Modern Ottoman Coffeehouse Culture and the Formation of the Consumer Subject*, pp. 747–748.

39 Karababa & Ger, *Early Modern Ottoman Coffeehouse Culture and the Formation of the Consumer Subject*, p. 749.

40 Hattox, *Coffee and Coffeehouses*, pp. 3–4.

41 Al-Ġazirī, *Umdat al-ṣafwa fi ḥill al-qahwa*, p. 225.

42 Hattox, *Coffee and Coffeehouses*, p. 6.

custom continued.⁴³ Bans on coffee houses, including decrees and *fatwas*, aimed to control the everyday lives of coffee consumers. The fact that these bans had to be repeated several times shows that consumers obeyed neither the law nor the regulations, and continued to consume coffee and the other pleasures offered at coffee houses.⁴⁴

Despite all the concerns, coffee did not cause any major political upheavals. On the contrary, the coffee trade contributed to the economic growth of cities and regions and became an integral part of public and private life. Ultimately, the official stance shifted. Despite previous restrictions on the trade, coffee had gained such prominence that Sultan Süleymân I not only oversaw the rise of coffee houses but also appointed a chief coffee cook in his palace.⁴⁵ Even the religious opinions shifted dramatically. Once attending coffee houses had become an everyday practice with increasing economic benefits for the state, the religious authorities issued a *fatwa* declaring coffee permissible and listing its health benefits.⁴⁶ Although the Ottoman rule contributed to the development of Yemen's coffee cultivation and export industry in the 16th century, the trade flourished even more after their departure. By the late 17th century, Yemen had become a global hub for coffee, with its market influencing merchants as far away as Amsterdam. The ruling Qāsīmi dynasty even earned the title of the 'Coffee Imamate', though their dominance proved short-lived as coffee cultivation soon spread beyond the region.⁴⁷

The health discourse forms the core context of the treatise analysed here, as the medical arguments presented in it provide essential insight into the intellectual debates that ultimately led to coffee's acceptance. Within this debate, al-Qūṣūnī's treatise offers the perspective of a 16th-century Ottoman court physician on the medical benefits of this increasingly popular beverage. Notably, al-Qūṣūnī's work, written for Sultan Süleymân I no later than 974/1566, predates the text by 'Abd al-Qādir al-Ġazīrī from 996/1587–8, which is commonly cited as the earliest report on coffee.⁴⁸

Etymology and linguistic variation

Regarding the etymology of the Arabic word for coffee, the term *qahwa* did not always denote a beverage made from coffee beans. In early Arabic poetry, *qahwa* referred to wine, and it was not until the late 8th/14th century that the term came to signify the beverage made from the coffee berry,⁴⁹ and it was generally called *qahwat al-bunn*.⁵⁰ Some scholars reject this hypothesis, however, proposing that the term *qahwa* is of African origin and linking it to Kaffa, a region associated with early coffee cultivation.⁵¹ Mahamid and Nissim (2018) suggest that the semantic shift from wine to coffee took place from the 10th/16th century onwards.⁵²

A significant linguistic feature in this treatise is the spelling of coffee as *qaḥwa* instead of the more common *qahwa*. Hammer-Purgstall (1829) notes that there was a debate in Turkey over whether *qahwa* should be pronounced with *ḥā* (*qaḥwa*) or *hā* (*qahwa*): 'mit einem scharfen H (Ha),

43 Al-Ġazīrī, *Umdat al-ṣafwa fī ḥill al-qahwa*, pp. 243–244.

44 Karababa & Ger, *Early Modern Ottoman Coffeehouse Culture and the Formation of the Consumer Subject*, p. 750.

45 Hattox, *Coffee and Coffeehouses*, p. 10.

46 Karababa & Ger, *Early Modern Ottoman Coffeehouse Culture and the Formation of the Consumer Subject*, p. 753.

47 Tagliacozzo, Siu & Perdue, *Asia Inside Out: Changing Times*, p. 117.

48 Ellis, *The Coffee House*, p. 15; van Arendonk, *Ḳahwa*, p. 449. The manuscript Leiden Or. 945 fol. 58r. explicitly states the date 974 (1566), while the text by al-ʿAydārūs dates it to 928 H. (1522). Van Arendonk (p. 451) provides the date 928/1522, despite referencing Leiden Or. 945 fol. 58r.

49 Van Arendonk, *Ḳahwa*, p. 451. Mahamid & Nissim suggest that the semantic shift took place from the 10th/16th century onwards (Mahamid & Nissim, *Sufis and Coffee Consumption*, p. 141).

50 Mahamid & Nissim, *Sufis and Coffee Consumption*, p. 141.

51 Van Arendonk, *Ḳahwa*, p. 451. However, even the supporters of this hypothesis acknowledge a possible linguistic contamination with the Arabic *qahwa* (ibid. p. 451).

52 Mahamid & Nissim, *Sufis and Coffee Consumption*, p. 141.

oder mit einem linden (He).⁵³ The difference in pronunciation is also recorded by Yūsuf al-Mağribī (970/1562–1019/1611), who describes attending a gathering where he recited a poem in praise of coffee. A Turkish participant responded with a similar poem in his own language, but instead of pronouncing the term as *qahwa*, he insisted on the pronunciation *qahwa*, earning him a rebuke from the Arabic speakers.⁵⁴ This phonetic shift from /h/ to /ħ/ in *qahwa* is attested in several languages spoken in the Middle East. For example, in the Arabic vernacular of Siirt (southeastern Turkey), the word is pronounced *qahwa*,⁵⁵ and the same shift occurs in the Domari language of Aleppo, where the Arabic loanword follows this pattern.⁵⁶ It is also present in the Neo-Aramaic dialects of Artun (southeastern Turkey)⁵⁷ and Midyat,⁵⁸ illustrating a broader linguistic phenomenon extending beyond Arabic and into other languages of the region.

The medical framework: humoral pathology

Al-Qūṣūnī's analysis of the properties of coffee is firmly rooted in Galenic humoral pathology. First introduced in the Hippocratic Corpus in the mid-fifth century BC, this fundamental theory was later adopted and further developed by Galen (129–c 216 AD).⁵⁹ It focuses on the four humours – blood, phlegm, yellow bile, and black bile – and the qualities with which they are associated.⁶⁰ Galen considered blood to be the most well-tempered of the humours,⁶¹ at once a humour in its own right and a balanced mixture of all the humours.⁶² Moreover, he defined health and disease in relation to nature, viewing health as the body's natural state that enables proper functioning, and disease as an unnatural state that impairs functions.⁶³ The ideal situation was a harmonious balance of the humours resulting in health, while illness was the result of an imbalance and had to be cured by balancing the humours.⁶⁴

This medical framework, established in Ancient Greece, remained central to medicine for several centuries. It was adopted and further elaborated upon in the Islamic world, where leading physicians both preserved and adapted the Galenic humoral principles. Among the most influential of these

53 Hammer-Purgstall, *Geschichte des Osmanischen Reiches*, V, p. 713; van Arendonk, *Ḳahwa*, p. 452.

54 Zack, *Egyptian Arabic in the Seventeenth Century: A Study and Edition of Yusuf al-Mağribī's 'Daf al-isr an kalam ahl Misr'*, p. 16.

55 Biṭunā, *On Loaned Consonants in the Spoken Arabic of Siirt*, p. 83.

56 Herin, *The Domari Language of Aleppo (Syria)*, p. 7.

57 Noorlander, *Towards a Typology of Possessors and Experiencers in Neo-Aramaic: Non-Canonical Subjects as Relics of a Former Dative Case*, p. 84.

58 Jastrow, O. & Talay, S. mit Nikita Kuzin, *Der neuaramäische Dialekt von Midyat (Miḍyoyo)*, Band II: Glossar, pp. 213–214.

59 Pormann & Savage-Smith, *Medieval Islamic Medicine*, p. 9. According to Siegel, the notion of the four humours can be attributed to Pythagoras (530 B.C.) and his school, which are considered the originators of this concept. The Hippocratic treatises were not consistent regarding the number of the humours. Moreover, Praxagoras considered the number to be nine or ten (Siegel, *Galen's System of Physiology and Medicine*, p. 216).

60 Blood is hot and moist, yellow bile is hot and dry, phlegm is cold and moist, and black bile is cold and dry (Brain, *Galen on Bloodletting*, pp. 6–7). Galen linked the humours to the four elements, i.e., air, water, fire, and earth; major organs, i.e., heart, brain, liver, and spleen (Pormann & Savage-Smith, *Medieval Islamic Medicine*, p. 10); and a temperament, i.e., sanguine, phlegmatic, choleric, and melancholic (Brain, *Galen on Bloodletting*, p. 7). Moreover, Galen reinforced their association with the Aristotelian qualities (Temkin, *Galenism*, p. 103), where fire is hot and dry, air is hot and moist, water is cold and moist, and earth is cold and dry (Brain, *Galen on Bloodletting*, p. 6). The humours were further associated with the four seasons: blood with summer and spring, phlegm with winter, yellow bile with summer and fall, and black bile with autumn (Siegel, *Galen's System of Physiology and Medicine*, p. 217).

61 Brain, *Galen on Bloodletting*, p. 8.

62 Siegel, *Galen's System of Physiology and Medicine*, p. 217.

63 Brain, *Galen on Bloodletting*, p. 4.

64 Brain, *Galen on Bloodletting*, p. 7.

were Abū Bakr Muḥammad ibn Zakariyyā' al-Rāzī (865–925), known in Latin as Rhazes,⁶⁵ and Ibn Sīnā (980–1037), known in Latin as Avicenna.⁶⁶ In his major contribution to the medical sciences, *Kitāb al-Qānūn fī l-Ṭibb*, 'Canon of Medicine', Ibn Sīnā derives his medical framework from Graeco-Roman sources, continuing the principles established by Aristotle, the Hippocratic Corpus, and Galen, while also making use of Graeco-Arabic authorities, especially al-Rāzī and al-Maḡūsī (d. ca. 990), medical figures closer to him in time and place.⁶⁷ Al-Qūṣūnī's analysis of coffee must therefore be understood as a direct application of this well-established, extensive, and continuous medical tradition.

Food in medicine

Galen emphasised the fundamental importance of food in medicine, noting that physicians throughout history have devoted significant attention to the properties of food as a crucial aspect of medical practice.⁶⁸ In his various large treatises, he investigated the role of foodstuffs, relating their properties to the medical framework of the four humours and their qualities.⁶⁹ He categorised foodstuffs as heating, cooling, moistening, or drying, as well as having either a thickening or a thinning effect on the humours. Galen also classified foodstuffs according to their strength, digestibility, and suitability for human beings – a tradition that he had adopted from earlier medical authorities.⁷⁰ Sources documenting the medicinal use of foodstuffs include the Hippocratic treatises *Regimen (I-IV)* and *Regimen in Acute Diseases*,⁷¹ Galen's *On the Properties of Foodstuffs (De alimentorum facultatibus)*, and al-Rāzī's *al-Ṭibb al-Mulūkī*, which focuses on curing illnesses through diet.⁷²

In *On the Properties of Foodstuffs*, Galen acknowledged that substances do not always produce the desired outcome. Despite having known properties, they may in some cases have no effect, or even the opposite of the predicted effect.⁷³ He also observed that certain foodstuffs possess pharmacological properties, acting as both food and a drug. These substances not only nourish the body but also cause qualitative alterations, such as warming, cooling, drying, or moistening. He classified a substance as purely food if it solely provides nutriment without causing a qualitative change, whereas a substance that does cause such alterations is a drug.⁷⁴ For instance, in *On Theriac to Piso*, which is commonly attributed to Galen, he notes that some drugs have a single effect: scammony purges yellow bile, and Cnidus berry purges phlegm and watery substances from the body.⁷⁵

65 El-Rouayheb & Schmidtke, *The Oxford Handbook of Islamic Philosophy*, p. 63.

66 Flannery, *Avicenna*, in *Encyclopaedia Britannica*; McGinnis, *Avicenna*, p. 4.

67 McGinnis, *Avicenna*, p. 227.

68 Galen, *On the Properties of Foodstuffs (De alimentorum facultatibus)*, p. 29.

69 Nutton, *Ancient Medicine*, pp. 240–241.

70 Nutton, *Ancient Medicine*, p. 241.

71 Totelin, *Therapeutics*, p. 205.

72 Ibn Abī Uṣaybi'a, *A Literary History of Medicine*, Volume 3-2, [11.5.25] p. 859; Sezgin, *Geschichte des arabischen Schrifttums Bd. 3*, p. 286, no. 16.

73 Galen, *On the Properties of Foodstuffs (De alimentorum facultatibus)*, p. 31.

74 Galen, *On the Properties of Foodstuffs (De alimentorum facultatibus)*, pp. 34–35.

75 Leigh, *On Theriac to Piso, Attributed to Galen*, p. 79. The author of the critical edition, translation, and commentary suggests that the attribution to Galen is problematic and possibly mistaken (*ibid.* p. 61). Nutton (2004) further notes that while most drugs acted by balancing bodily humours, Galen recognised a further class of drugs whose efficacy was proven by experience, even when their activity could not easily be assigned to any specific quality. These drugs, he believed, worked through their total substance, mixing their individual components to produce new and effective combinations. These composite drugs targeted affected areas directly and were often proven effective even when their individual qualities were difficult to discern. For instance, phlegmagogues drew out phlegm, and cholagogues expelled excess bile, effectively removing it from the body. (Nutton, *Ancient Medicine*, pp. 242–243.)

Al-Qūṣūnī's application of humoral pathology

Throughout the treatise, al-Qūṣūnī's reasoning suggests that he was influenced by the Greek physicians, as he conducts his investigation of coffee within the well-established medical framework. Al-Qūṣūnī identifies two classes of qualities possessed by coffee: active and passive. In terms of its active qualities – whether it is hot or cold – coffee appears to be balanced and slightly cold. He reasons that coffee must have composite qualities because it needs to contain a hot component that contributes to its digestive effect.⁷⁶ As for its passive qualities – whether it is moist or dry – he identifies coffee as dry, because it dries bodies and causes alterations in bodies with dry temperaments.⁷⁷ These qualities of coffee are also discussed in other early sources, the most relevant of which is that of al-Anṭākī, a contemporary of al-Qūṣūnī (see below). Moreover, Al-Ġazīrī and Robinson (1893) describe a story from 917 H./1511 AD in Mecca, in which two Persian physicians deemed coffee to be very bad, *frigida et sicca*, cold and dry;⁷⁸ and a 17th-century English source agrees with its drying quality.⁷⁹ Regarding coffee's benefits for the body, al-Qūṣūnī takes a neutral stance, which aligns with the nuanced understanding of qualities, as attested in the Hippocratic Corpus. According to this view, every substance possesses both positive and negative attributes depending on the context. For example, blood, whether liquid or solid, could be good or bad,⁸⁰ and all foodstuffs could be beneficial or harmful depending on the context.⁸¹ Al-Qūṣūnī also aligns with Galen's view on dosage, acknowledging the uncertainty in determining the precise amount of a remedy that should be used. According to Galen, it is clear *when* something should be administered, but a physician cannot be sure *how much* they should give to the patient.⁸²

Al-Qūṣūnī's analysis of coffee both aligns with and diverges from that of his contemporary, al-Anṭākī (d. 1008 H./1599 AD),⁸³ who states that coffee is either moderate or cold in the first degree and has the capacity to dry out excess moisture. According to him, the benefits of coffee include its effectiveness against phlegmatic cough, catarrh, smallpox, measles, and bloody urticaria. It also opens blockages and increases urine flow. Al-Anṭākī further notes that coffee, *al-bunn*, is 'nowadays' called *al-qahwa* when it is roasted and boiled. Among its negative effects on the body are that it causes periodic headaches and insomnia, and makes one very thin [by dispelling hunger]. It also causes haemorrhoids and cuts off sexual desire (*yaqṭa'u ṣahwat al-bāh*). Moreover, al-Anṭākī mentions that coffee occasionally leads to melancholia. He adds that whoever wishes to drink coffee to increase their energy and to dispel laziness should consume it with sweets, pistachio oil, and butter. He also mentions that some people drink coffee with milk, which is a mistake: it carries the risk of leprosy.⁸⁴

The questions al-Qūṣūnī addresses in his treatise are (1) whether coffee consumption is harmful or beneficial; (2) what qualities coffee possesses; (3) what the beneficial quantity of coffee for consumption is; (4) whether excessive consumption is harmful; (5) whether coffee strengthens sexual desire; (6) whether it should be consumed on a full or an empty stomach; (7) whether it aids digestion; (8) whether it should be consumed hot or cold; and (9) whether anything should be added to it during preparation.

⁷⁶ Edition and translation, 1:9.

⁷⁷ Edition and translation, 1:10.

⁷⁸ Al-Ġazīrī, *Umdat al-ṣafwa fī ḥill al-qahwa*, pp. 422–223; Robinson, *The Early History of Coffeehouses in England*, pp. 23–24.

⁷⁹ M.P., *A Character of Coffee and Coffee-Houses by M.P.*, pp. 3–4.

⁸⁰ Hippocrates, *Nutrimēt*, LCL 146, XLIV (pp. 358–359).

⁸¹ Hippocrates, *Nutrimēt*, LCL 146, introduction (pp. 338–339).

⁸² Galen, *Cur. Rat. Ven. Sect.*, pp. 84.

⁸³ Brockelmann & Vernet, *al-Anṭākī* (online source).

⁸⁴ Al-Anṭākī, *Tadkirat ūlī al-albāb*, I, p. 75. (My translation.)

Textual witnesses and authenticity

Fī bayān aḥwāl al-qahwa wa-ḥāṣṣiyyatihā wa-manāfi'ihā is preserved in Leiden University Libraries as manuscript Or. 945:16,⁸⁵ and forms part of a collective volume. The text is dated to 974 H. (1566 AD) and comprises only the folio 58r. The ink used is black, with red ink being used in two places: for the title and to mark the part of the treatise where the answer to the question begins (1:5, *ṣūrat al-ḡawāb*). The paper is brown, and the dimensions of the folios are 21 × 12.6 cm. There are no illuminations. The text is written on 33 lines with *nasta'liq* script. In three instances, words have been completed in the margin due to the lack of space within the text block.

Al-Qūṣūnī's treatise is noted in *The Encyclopaedia of Islam*⁸⁶ and *The Pursuit of Pleasure*,⁸⁷ both of which mention its existence while indicating that only a single copy survives. However, the treatise is also registered in a re-told form in Ragıb Paşa, K. No. 1482, ff. 56r–56v, and an additional version of the treatise is preserved in *al-Nūr al-sāfir 'an aḥbār al-qarn al-ʿāšir* by al-ʿAydārūs.⁸⁸ The Ragıb Paşa version was brought to modern scholarly attention in 1937 by M. Şerefeddin Yalrkaya, who provided a Turkish translation and a French summary of the text.⁸⁹ These additional textual witnesses offer variant readings and distinct chronological contexts for the work.

The Ragıb Paşa version (K. No. 1482, ff. 56r–56v) is dated to 19 *rabīʿ al-awwal* 1137 (H.), corresponding to the 6th of December 1724 AD. It is preserved in Istanbul as part of a collection with the title *el-Kavlü'l-Enîs ve'd-Dürrü'n-Nefîs ale'l-Kasîdeti'l-Ayniyye li'r-Reîs*, which is attributed to Madyan ibn ʿAbd al-Raḥmān al-Miṣrî al-Qūṣūnî. The manuscript measures 218 × 128 mm, with a written area of 154 × 67 mm. The text is written on 25 lines with *nasta'liq* script. The margins are clear, apart from a single marginal note reading *maṭlab fî l-qahwa* in the middle of folio 56r, which indicates the beginning of the short treatise. The present article also takes into account the version in *al-Nūr al-sāfir 'an aḥbār al-qarn al-ʿāšir*⁹⁰ by ʿAbd al-Qādir al-ʿAydārūs (1570–1628 AD), who dates al-Qūṣūnī's treatise to 928 H. (1522).⁹¹ This third textual witness, edited by Maḥmūd al-Arnā'ūt in 2001, is, according to al-Arnā'ūt, based on a manuscript preserved at Juma al-Majid Center for Culture and Heritage in Dubai.⁹²

The dating of the treatise presents a dilemma that must be addressed with caution. The base manuscript, Leiden Or. 945:16, gives the date as 974 H./1566 AD.⁹³ The Ragıb Paşa manuscript also dates al-Qūṣūnī's treatise on coffee to 974 H. However, the version reported by al-ʿAydārūs gives a much earlier date, 928 H./1522 AD.⁹⁴ Since al-ʿAydārūs's work is also a retrospective account, and the first coffee house was not established in Istanbul until 1554 AD,⁹⁵ the date provided by al-ʿAydārūs presents a chronological difficulty. It is unlikely that Muḥammad Badr al-Dîn al-Qūṣūnî, an Ottoman court physician, would have authored a treatise on coffee decades prior to its introduction and widespread use in Istanbul. Therefore, the earlier date is deemed unlikely and corrupted, even though it fits within the time span of al-Qūṣūnî's active years (926–984 H./1520–1574 AD), as well as his service in the court of Sultan Süleymān I (r. 926–974 H./1520–1566 AD).⁹⁶

⁸⁵ Witkam, J. J., *Inventory of the Oriental Manuscripts of the Library of the University of Leiden*, Vol. 2, p. 403.

⁸⁶ Van Arendonk, *Qahwa*, p. 451.

⁸⁷ Matthee, *The Pursuit of Pleasure*, pp. 145–146.

⁸⁸ Brockelmann, *Geschichte der Arabischen Litteratur II*, p. 666; Mahamid & Nissim, *Sufis and Coffee Consumption*, pp. 158–159.

⁸⁹ Yalrkaya, *Kahveye dair bir türk hekiminin şahsî mütalâaları*, pp. 3–8.

⁹⁰ Based on a revised edition by Maḥmūd al-Arnā'ūt, Beirut, 2001.

⁹¹ Al-ʿAydārūs, *al-Nūr al-sāfir 'an aḥbār al-qarn al-ʿāšir*, pp. 190–192.

⁹² Al-ʿAydārūs, *al-Nūr al-sāfir 'an aḥbār al-qarn al-ʿāšir*, p. 8.

⁹³ Leiden Or. 945:16, 58r.

⁹⁴ Al-ʿAydārūs, *al-Nūr al-sāfir 'an aḥbār al-qarn al-ʿāšir*, pp. 190–192.

⁹⁵ Tannahill, *Food in History*, p. 274.

Based on an analysis of all three versions, the attribution to al-Qūṣūnī remains solid. The versions in Ragīb Paşa, K. No. 1482, ff. 56r–56v and al-‘Aydarūs’ work demonstrate similarities that differ from Leiden Or. 945:16. As they were copied later, it is highly probable that the copy preserved in Leiden is the closest to the original.

Principles of edition and translation

This edition aims to facilitate clarity and ease of referencing by standardising the Arabic spelling and introducing modern punctuation, paragraphs, and layout. Leiden Or. 945:16 itself demonstrates variation in spelling, especially concerning the spelling of *hamza*, some diacritics, and other additional signs. *Hamza* occurs only in medial and final positions,⁹⁷ *madda* occurs in two instances above a long *alif* for no apparent reason, *šadda* occurs frequently, yet not consistently, and final *yā’* is spelled without diacritics, as an *alif maqṣūra*. Nunation occurs in a few cases. Apart from these operations, the reproduced text is faithful to the original manuscript. Turning to Ragīb Paşa K. No. 1482, *hamza* occurs in medial and final positions, and final *yā’* is spelled without diacritics. *Šadda* and *madda* do not occur. Vowel signs and *tanwīn* occur in one instance. A vertical stroke above a word indicates the start of a new sentence.

This edition is based on manuscript Leiden Or. 945:16 (hereafter L). Variant readings from Ragīb Paşa K. No. 1482 (hereafter RP), as well as the version of al-‘Aydarūs’ *al-Nūr al-sāfir ‘an aḥbār al-qarn al-‘āšir* (hereafter N), are recorded to note discrepancies between the textual variants. Interventions in the base text occur when the reading of L seems less plausible, in which case the chosen reading from N and/or RP is adopted. The consistent spelling of coffee as *qahwa* in N and RP is not noted in the critical apparatus. It is worth mentioning that L abbreviates the word *ta‘ālā* as *ta‘*, while the word is omitted in N and RP.

The critical apparatus notes the discrepancies in three specific ways:

- Variant readings: When the content of RP and/or N differs from that of L, the variant reading in RP and/or N is noted.
- Omissions and additions: If a word or a phrase is omitted or added in RP and/or N, it is marked with a + [word] or with a – [word].
- Adoption of RP and N reading: In cases where the content of RP and/or N is adopted into the main text, the apparatus notes the adopted reading, followed by a colon and the reading of L that was replaced.

Regarding the translation, I have aimed to produce a readable English translation while maintaining the original structure and the author’s voice. Some necessary clarifications are inserted in square brackets for the reader’s benefit.

⁹⁶ Ullmann, *Die Medizin im Islam*, pp. 180–181; Witkam, J. J., *Inventory of the Oriental Manuscripts of the Library of the University of Leiden*, Vol. 2, p. 403.

⁹⁷ For example, in the words *مأجورين* *مائلة*, and *أطباء*

Arabic text

في بيان أحوال القهوة وخاصيتها ومنافعها

- 1:1 هذه صورة سؤال وجواب رفع للشيخ بدر الدين الحكيم القوصوني حكيم السلطان سليمان خان في شرب القهوة وما يتعلق بها من جهة الطب. رحمة الله تعالى رحمة واسعة الحمد لله رب العالمين.^١
- 1:2 ما قولكم رضي الله تعالى عنكم ونفع بعلومكم^٢ في القهوة: هل استعمالها مضر أم نافع؟ وهل طبعها الحرارة أم البرودة أم البيوسة أم الرطوبة؟
- 1:3 وإذا قلتم بأن استعمالها نافع فما القدر النافع منها وما المضر؟ وهل الإكثار منها ضار أم لا؟ وهل فيها تقوية للباه أم لا؟ وهل استعمالها على الشبع مضر أم نافع؟ وكذلك استعمالها على الجوع، هل هو مضر أم نافع؟
- 1:4 وهل فيها هضم أم لا؟^٤ وهل استعمالها حارة أولى من استعمالها باردة أم العكس؟^{١٠} وهو الأولى أن يضاف إليها^{١١} شيء من الأشياء عند طبخها أم لا؟ افتونا ماجورين من فضل رب العالمين^{١٢} أثابكم الله الجنة عنه وكرمه.^{١٣}
- 1:5 صورة الجواب: الحمد لله لم أجد^{١٥} ذكر البن^{١٦} فضلا عن القهوة في شيء من كتب الطب التي طالعته واطلعت عليها. والذي نتكلم فيه الآن^{١٧} إنما هو بحسب ما ظهر لنا من آثارها بطريق التجربة.
- 1:6 فأما هل^{١٨} استعمالها مضر أم لا، فنقول إنه ليس يمكننا الحكم على دواء من الأدوية بأنه نافع مطلقا ولا بأنه ضار مطلقا في كل حال، بل إن أثبتنا له نفعاً في بعض الأحوال فلا ينافي ذلك أن تكون^{١٩} له مضرّة في حالة^{٢٠} أخرى وأن يكون غيره أنفع منه في تلك الحالة.^{٢١}

- ١ N: سئل الحكيم بدر الدين محمد بن محمد القوصوني بما صورته
RP: خاتمة في القهوة المتخذة من البن أو قشره سئل عنها شيخ مشايخنا رئيس الأطباء على الإطلاق عند أهل الخلاف والوفاق بدر الدين والدنيا محمد بدر الدين بن محمد ابن محمد القوصوني حكيم السلطان سليمان خان تغمد الله الجميع رحمته واسكنهم فسيح جنته عما هذا صورته
- ٢ N & RP - تعالى
- ٣ RP - ونفع بعلومكم؛ N + المسلمين
- ٤ RP: إن
- ٥ N & RP: وكذلك؛ L: وكذا
- ٦ RP: على الخوار
- ٧ RP - هل هو
- ٨ N & RP - أم لا
- ٩ N: فآفة
- ١٠ N & RP: عكسه
- ١١ N & RP: وهل يضاف إليها
- ١٢ N - من فضل رب العالمين
- ١٣ RP - افتونا ماجورين من فضل رب العالمين أثابكم الله الجنة عنه وكرمه؛ N - عنه كرمه
- ١٤ N & RP: فأجاب
- ١٥ RP: لم أر
- ١٦ N: ذكرا للبن
- ١٧ N: والذي نتكلم فيه الآن؛ RP: والذي نتكلم به الآن؛ L: والذي يتكلم به الإنسان
- ١٨ N & RP: هل؛ L: كون
- ١٩ N & RP: يكون
- ٢٠ RP: حال
- ٢١ N: الحال

1:7 ونوضح^{٢٢} ذلك بمثال فنقول: الدرياق الفاروق،^{٢٣} قد^{٢٤} أجمع الأطباء على^{٢٥} أنه أعظم الأدوية نفعا^{٢٦} ومع ذلك لا يمكن أن نقول ينفعه^{٢٧} مطلقا في^{٢٨} كل حال، بل بعض الأدوية المبردة كبزر القطونا^{٢٩} للمحموم^{٣٠} مثلا^{٣١} أنفع منه بكثير.

1:8 فبقي أن يقال إن القهوة كغيرها من الأدوية لها نفع في بعض الأحوال.

1:9 وأما^{٣٢} طبعها،^{٣٣} فنقول أيضا^{٣٤} أما^{٣٥} في الكيفيتين الفاعلتين، أعني الحرارة والبرودة، فالظاهر أنها معتدلة ومائلة^{٣٦} إلى البرودة^{٣٧} قليلا، ولا يبعد أن يكون مركبة القوى وأن يكون^{٣٨} بها^{٣٩} جزء حار به كون^{٤٠} الهضم ونحوه من أفعالها، فإن كثيرا من الأدوية كذلك.

1:10 وأما في الكيفيتين المنفعلتين، أعني الرطوبة واليبوسة،^{٤١} فتجدها مائلة إلى جانب^{٤٢} اليبس لأنها نجدتها تجفف^{٤٣} الأبدان وتغير أصحاب^{٤٤} الأمزجة^{٤٥} اليابسة.

1:11 وأما القدر النافع منها فهو مختلف بحسب مزاج مستعملها.

1:12 وأما هل الإكثار منها مضر فنقول: قال الأطباء إن كل كثرة عدو للطبيعة ولا شك أن^{٤٧} الإكثار من القهوة^{٤٨} مضر خصوصا لذوي^{٤٩} الأمزجة اليابسة.

1:13 وأما هل فيها تقوية للباه فنقول: لا^{٥٠} يبعد ذلك بواسطة تجفيفها للرطوبات المرطبة للأعضاء^{٥١} فيكون ذلك^{٥٢} بطريق العرض.

٢٢	N & RP: ونوضح؛ L: وتوضح
٢٣	completed in the margin in L: الدرياق الفاروق
٢٤	N & RP + قد
٢٥	N - على
٢٦	N & RP - نفعا
٢٧	N: لا يمكن أن يقال بنفعه؛ RP: لا يقال ينفعه
٢٨	N: وفي
٢٩	N & RP: بزر قطونا
٣٠	RP: للمحمومين
٣١	RP - مثلا
٣٢	N: فأما
٣٣	N: طبع القهوة
٣٤	N - أيضا
٣٥	N: إن؛ RP - فنقول أيضا أما
٣٦	RP: وتميل
٣٧	N & RP: البرد
٣٨	N - مركبة القوى وأن يكون
٣٩	N: لها
٤٠	N & RP: يكون
٤١	RP + أعني الرطوبة واليبوسة
٤٢	RP - جانب
٤٣	N & RP: تجفف؛ L: يجفف
٤٤	RP - أصحاب
٤٥	N: الأمراض
٤٦	N & RP: فقد، - فنقول
٤٧	RP: بأن
٤٨	RP: منها
٤٩	N & RP: بذوي
٥٠	N: فنقول لا؛ L & RP: فلا
٥١	N: للأعصاب
٥٢	RP - بواسطة تجفيفها للرطوبات المرطبة للأعضاء فيكون ذلك

1:14 وأما هل استعمالها على الشبع مضر فنقول: قد نهى الأطباء عن استعمال^{٤٤} المشروبات عقيب^{٥٥} استعمال الغذاء لما^{٥٦} يفجج^{٥٧} الغذاء^{٥٨} وينفذه^{٥٩} قبل انهضامه لكن القليل من المشروبات، خصوصا المعينة على الهضم كالقهوة ونحوها، نافع^{٦٠} بشرط أن لا يبلغ إلى حد^{٦١} ينفذ^{٦٢} الغذاء على^{٦٣} فجأته. وأولى ما استعملت القحوة بعد أخذ^{٦٤} الغذاء في حالة الانهضام.

1:15 فأما^{٦٥} على الجوع فمجنفة تنفع^{٦٦} أصحاب الأمزجة الباردة الرطبة وتضر^{٦٧} المهزولين ويابسي المزاج^{٦٨} واستعمالها^{٦٩} فآرة أولى به^{٧٠} لأنها حينئذ تكون أذ^{٧١} طعاما^{٧٢} وأقوى على النفوذ.

1:16 وأما هل^{٧٣} يضاف إليها دواء^{٧٤} عند الطبخ فنقول: لا^{٧٥} يتعد^{٧٦} أن يضاف إليها^{٧٧} أدوية مصلحة لمزاجها مقوية لأفعالها لكن تخرج حينئذ^{٧٨} عن كونها قحوة وتدخل في جملة الأدوية الناقصة^{٧٩}. ولكن^{٨٠} الأولى أن يضاف إليها شيء من السكر أو العسل لباردي المزاج^{٨١} ليعين^{٨٢} على نفوذها والله تعالى^{٨٣} أعلم.

قال محمد بدر الدين القوصوني سنة ٩٧٤هـ^{٨٤}

٥٣ - RP فنقول؛ RP: فقد

٥٤ + N سائر

٥٥ - RP عقيب

٥٦ - RP لأنها

٥٧ - RP تفججه

٥٨ - RP الغذاء

٥٩ - RP وتنفذه

٦٠ - N نافعة

٦١ - N تنفذ

٦٢ - N إلى

٦٣ - RP آخر

٦٤ - RP وأما

٦٥ - N تنفع؛ L: ينفع؛ RP not evident in

٦٦ - N وتغير

٦٧ - N الأمزجة؛ RP - الرطبة وتضر المهزولين ويابسي المزاج

٦٨ - N completed in the margin واستعمالها

٦٩ - N - به؛ RP - واستعمالها فآرة أولى به

٧٠ - RP: لأنها تكون أذ طعاما؛ N: لأنها حينئذ تكون أذ طعاما؛ L: لأنها حين يكون المر طعاما

٧١ + N أنه

٧٢ - N completed in the margin دواء

٧٣ - RP: فلا؛ - فنقول

٧٤ - RP: فلا يبعد؛ N: لا يبعد as لا يتعد editor has chosen to read؛ L: لا يتعد

٧٥ - RP إليها

٧٦ - N & RP - حينئذ

٧٧ - N & RP: النافعة

٧٨ - RP: لكن

٧٩ - RP: للباردي المزاج

٨٠ - RP - ل؛ RP & N + ذلك

٨١ - N تعالى

٨٢ - RP: قال محمد بدر الدين القوصوني أن تفي حامدا ومصليا ومسلما وكتبه في سنة أربعة وسبعين وتسعمائة

N: قاله بدر الدين محمد القوصوني في المحرم سنة ٩٢٧ هـ

English translation

On coffee, its properties and benefits

1:1 This is a [treatise in a] question-and-answer format raised by Šayḫ Badr al-Dīn al-Qūṣūnī, the physician of Sultan Süleymān Khan, on drinking coffee and related medical considerations. May the Great God have mercy on him. Praise be to God, Lord of the Universe.

1:2 What do you say – may God be pleased with you, and may He bestow benefits through your knowledge – about coffee: is its consumption harmful or beneficial? Is its nature hot, cold, dry, or moist?

1:3 And if you were to say that consuming it is beneficial, then what amount of it is beneficial and what would be harmful? Is its excessive consumption harmful or not? Does it strengthen sexual desire or not? Is consuming it on a full stomach harmful or beneficial? Likewise, is consuming it on an empty stomach harmful or beneficial?

1:4 Does it promote digestion or not? Is it better to consume it hot rather than cold, or the opposite? Should anything be added to it during preparation or not? Advise us, rewarded by the grace of the Lord of the Universe; may God reward you with Paradise and his generosity.

1:5 The answer: Praise be to God. I have not found any mention of coffee beans, let alone coffee, in any of the medical books that I have come across and inspected. What we are discussing now is based on what we have witnessed regarding its effects, through [personal] experience.

1:6 As to whether its consumption is harmful or not, we [first] remark that we cannot judge any drug to be completely beneficial or completely harmful in all circumstances. Rather, if we establish that it is beneficial in some cases, that does not mean it cannot be harmful in other cases, or that another [drug] would be more beneficial for that case.

1:7 We clarify this by saying that physicians have unanimously agreed that *fārūq* theriac⁹⁸ is one of the most beneficial drugs. Nevertheless, we cannot say that it is beneficial in every case. Rather, some cooling drugs, such as fleawort seeds, are much more beneficial for someone suffering from fever, for example.

1:8 What remains to be said is that coffee, like all other drugs, is beneficial in some cases.

1:9 As to its nature, including its two active qualities, namely heat and cold, it appears to be balanced, perhaps slightly cold. It is not unlikely that it has composite capacities, containing a hot component that contributes to its digestive and other effects. For indeed, several drugs are like that.

1:10 As to its two passive qualities, namely dryness and moisture, you see that it is somewhat dry, since we perceive it to dry bodies and cause alterations in those with dry temperaments.

1:11 As to the beneficial quantity, this varies according to the temperament of the person consuming it.

1:12 As to whether its excessive consumption is harmful, we say that physicians have stated that every excess is hostile to nature. There is no doubt that excessive consumption of coffee is harmful, especially for those with dry temperaments.

1:13 It is not impossible that it strengthens sexual desire through its ability to dry out the [excess] moisture that causes the parts to become damp. This effect occurs incidentally [rather than being the primary effect].

98 *Al-diryāq al-fārūq*

1:14 As to whether consuming it on a full stomach is harmful, we say that physicians have prohibited consuming beverages immediately after consuming food, as this makes the food [remain] raw and causes it to pass through before it has been digested. However, a small number of beverages, particularly those that aid digestion, such as coffee⁹⁹ and the like, are beneficial, on the condition that they are not consumed in quantities that cause the food to pass through raw. The most suitable thing is to consume coffee [a while] after eating, when the food is [already] being digested.

1:15 As to [consuming coffee] on an empty stomach, it dries and benefits those with cold, moist temperaments, but harms the emaciated and those with dry temperaments. It is preferable to consume it lukewarm, since then its taste is sweeter, and it therefore has a greater ability to pass through.

1:16 As to whether anything should be added to it during preparation, we say that it would not be impossible to add drugs to it that improve its temperament and enhance its effects. However, then it ceases to be just coffee and comes under the heading of deficient drugs. The most suitable addition is a small amount of sugar or honey for those with cold temperaments, to help it pass through; the Great God knows best.

Muḥammad Badr al-Dīn al-Qūṣūnī
Year 974 [H.]

Commentary

1:5 what we are discussing now: While L reads *wa-llaḍī yatakallamu bihi l-insān*, ‘what people talk about’, N reads *wa-llaḍī natakallamu fīhi l-āna*, ‘what we are discussing now’, with a slight deviation in RP, where *bihi* instead of *fīhi* is deemed more suitable for the context.

1:7 *al-diryāq al-fārūq*: More commonly called *tiryāq*, from the Greek *theriaka*, theriac is a compound drug used against poisons. It originally comprised remedies that counteract bites from venomous creatures such as vipers. It is composed of several ingredients, including viper flesh. The theriac known as *fārūq* is one of several varieties of the drug.¹⁰⁰ Johnstone describes theriac as the ‘ultimate of compound drugs’¹⁰¹ that the Arab physicians held in high value.¹⁰² For more on theriac, see e.g., Leigh, Robert, *On Theriac to Piso, Attributed to Galen*,¹⁰³ and Ullmann, *Die Medizin im Islam*, p. 321.¹⁰⁴

1:9 & 1:10: slightly cold/somewhat dry: Al-Ġazīrī describes an incident from 1511 involving Khair Beg, the governor of Mecca, who observed people consuming coffee. Concerned about its impact, he gathered an assembly to discuss the lawfulness of the drink for Muslims. Two Persian physicians were invited to be consulted on the matter, and they assured the assembly that coffee is harmful to health since it is *frigida et sicca*, cold and dry, in terms of the Aristotelian qualities.¹⁰⁵ In *A Character of Coffee and Coffee-Houses*, an early English source from the 17th century, the author M.P. notes that coffee, being dry, has a drying quality that dries up ‘the radical moisture.’ As mentioned in the intro-

⁹⁹ *Qahwa*. See commentary.

¹⁰⁰ Fellmann, *Das Aqrābādīn al-Qalānīsī*, 3. 89 (pp. 174–178).

¹⁰¹ Johnstone, *Galen in Arabic: The Transformation of Galenic Pharmacology*, p. 207.

¹⁰² Johnstone, *Galen in Arabic: The Transformation of Galenic Pharmacology*, p. 208.

¹⁰³ Leigh, Robert, *On Theriac to Piso, Attributed to Galen: A Critical Edition with Translation and Commentary*, Brill, Leiden, 2016.

¹⁰⁴ Ullmann, *Die Medizin im Islam*, p. 321.

¹⁰⁵ Al-Ġazīrī, *Umdat al-ṣafwa fī hill al-qahwa*, p. 236; Robinson, *The Early History of Coffeeshouses in England*, pp. 23–24.

duction, al-Anṭākī states that coffee is either moderate or cold in the first degree and has the capacity to dry out excess moisture.¹⁰⁶

1:10 passive qualities: The observation that coffee dries bodies relates to Galen's understanding of the qualities. According to him, the proportion of hot, cold, dry, and wet qualities that make up the mixture is not only passive but also active, causing a particular effect: heating, cooling, drying, or moistening.¹⁰⁷ In particular, hot and dry qualities are often closely related in terms of their effects on the body. If something is inherently hot, it is likely to also be dry, because heat causes moisture to evaporate.¹⁰⁸ Similarly, when a substance exhibits a drying effect, such as the one described in this passage, it points to the presence of heat among its qualities. Furthermore, the interaction between the drug's qualities and the body's temperament determines its therapeutic effect, as the drug induces alterations in the body's internal balance of these qualities.¹⁰⁹

...since we perceive it to dry bodies: See commentary for passages 1:9 & 1:10 above.

...namely dryness and moisture: the words *a'nī al-ruṭūba wa-l-yubūsa* are present only in RP, but are adopted into the edition to match the style of the previous passage.

1:11 beneficial quantity: Determining the proper dosage of any drug is affirmed to be difficult; cf. Galen: 'Nothing shows so clearly that the medical art is in practice a matter of guesswork as the question of the amount of each remedy. We often know exactly that the time for administering food or drink, whether cold or hot, is at hand; we cannot be sure, however, of how much we ought to give.'¹¹⁰

1:12 every excess is hostile to nature: Cf. Hippocrates: 'all excess is hostile to nature.'¹¹¹

1:13 sexual desire: This passage seems to suggest that coffee's ability to strengthen sexual desire derives from its capacity to dry out excess moisture in the body. According to Galenic theory, 'When the nutriment becomes altered in the veins by the innate heat, blood is produced when it is in moderation, and the other fluids when it is not in proper proportion.'¹¹² Thus, an imbalance may lead to an overproduction of other humours, resulting in excess moisture that could hinder various bodily functions, including sexual desire. Maimonides notes that sexual intercourse itself has both a drying and a cooling effect, benefiting particularly those whose bodies contain a vaporous superfluity caused by a hot dyscrasia.¹¹³ According to Galen's principle, 'opposites are cures of opposites',¹¹⁴ it is logical to assume that coffee, having a drying effect, will dry out the excess moisture that causes dullness of sexual desire. On the other hand, the 16th-century physician al-Anṭākī states quite the opposite, suggesting that coffee 'cuts off sexual desire' (*yaqṭa'u šahwat al-bāh*).¹¹⁵

1:14 physicians have prohibited...: For example, al-Suyūṭī prohibits drinking after having eaten.¹¹⁶ On the other hand, according to the Hippocratic corpus, this depends on the season. In *Regimen III*,

¹⁰⁶ Al-Anṭākī, *Tadkirat ūlī al-albāb*, I, p. 75. (My translation.)

¹⁰⁷ Galen, *Mixtures (De Temperamentis)*, p. 9.

¹⁰⁸ Galen, *Mixtures (De Temperamentis)*, Book I, pp. 52–53.

¹⁰⁹ Galen, *Mixtures (De Temperamentis)*, Book III, p. 154 n. 4.

¹¹⁰ Galen, *Cur. Rat. Ven. Sect.*, pp. 84.

¹¹¹ Hippocrates, *Aphorisms II*, LI (LCL 150: 120–121).

¹¹² Galen, *Mixtures (De Temperamentis)*, Book II, p. 125 n. 99.

¹¹³ Maimonides, *Aphorisms*, Book 17, 9, p. 21.

¹¹⁴ Galen, *Method of Medicine to Glaucon, Book I*, 10 (LCL 523: pp. 384–385).

¹¹⁵ Al-Anṭākī, *Tadkirat ūlī al-albāb*, I, p. 75.

¹¹⁶ Al-Suyūṭī, *Medicine of the Prophet*, p. 13.

Hippocrates recommends assimilating one's regimen to the season. One's habits regarding food, drink, exercise, and sexual intercourse need to vary depending on the time of the year, and the regimen should be changed gradually between the seasons. For example, during the summer months, he recommends drinking plenty of liquids with food.¹¹⁷

...such as coffee: The author may either have been inconsistent in his spelling or be distinguishing between coffee, the main subject of the treatise, and other beverages that have a recognised role in aiding digestion. See *Etymology and linguistic variation* in the introduction of this article.

1:15 [consuming coffee] on an empty stomach: Hattox (1985) notes that the etymology of *qahwa* has also been linked to its appetite-suppressing quality: just as coffee removes one's desire for sleep, wine was thought to remove one's desire for food.¹¹⁸ The idea goes back to Hippocrates, who stated that 'strong drink dispels hunger.'¹¹⁹ Strong drink, in this case, is understood as undiluted wine.¹²⁰ As for a drying substance being beneficial against moist humours, see the commentary to paragraph 1:14 above.

lukewarm...sweeter: Leiden Or. 945:16 reads *murr* (bitter); however, both Ragıb Paşa, K. No. 1482 and the version provided by al-ʿAydarūs read *aladd* (sweeter). This presents the greatest conceptual discrepancy between the textual witnesses. While the reason for this divergence is unknown, the reading 'sweeter' is supported by recent research on the sensory characteristics of coffee. Coffee is perceived as significantly sweeter and less acidic as the temperature sinks, a principle especially exemplified in the case of cold-brewed coffee.¹²¹

sweeter... greater ability to pass through: As for the digestive properties of wine, both Hippocrates and Galen agree that water is cooling and moist, while wine is hot and dry.¹²² Wine also has a strong purgative effect.¹²³ According to Hippocrates, sweet wine is more laxative than dry wine.¹²⁴ Galen goes further, explaining that 'Wine requires the smallest change for assimilation, which is why it is the quickest to nourish and strengthen.'¹²⁵ Oribasius too notes the digestive qualities of wine: 'wine can encourage heat, fill the body with strength and digest food from all parts'.¹²⁶ If wine is poured on a part externally, its effect is cooling.¹²⁷

1:16 deficient drugs: This is understood as meaning that, when ingredients are mixed, this may prevent them from achieving their full therapeutic potential. In this context, adding other drugs to coffee during its preparation seemingly alters the efficacy and properties of the drugs, leading to a less effective or even unpredictable outcome. Intriguingly, both RP and N read *al-adwiya al-nāfiʿa*, 'beneficial drugs', which is deemed less plausible in the context. While it is possible that the copyists have understood that adding substances to coffee would be beneficial, turning it into a composite drug, the phrase 'then it ceases to be just coffee' indicates that the author is concerned with the loss of its classification as a simple drug. Hence, the reading in L remains solidly within the Galenic framework of a distinction between simple and composite drugs, i.e., individual substances with a specific impact and

¹¹⁷ Hippocrates, *Regimen III*, (LCL 150: LXVIII, LXIII, pp. 368–381).

¹¹⁸ Hattox, *Coffee and Coffeehouses*, pp. 18–19.

¹¹⁹ Hippocrates, *Aphorisms II*, XXI (LCL 150: pp. 112–113).

¹²⁰ Jacques & Allies, *Wine and Medicine in Ancient Greece*, p. 183.

¹²¹ Batali, Lim, Liang, Yeager, Thompson, Han, Ristenpart, Guinard: *Sensory Analysis of Full Immersion Coffee: Cold Brew Is More Floral, and Less Bitter, Sour, and Rubbery Than Hot Brew*.

¹²² Jacques & Allies, *Wine and Medicine in Ancient Greece*, p. 177. See also Hippocrates, *Regimen II*, LII (LCL 150: pp. 342–325).

¹²³ Jacques & Allies, *Wine and Medicine in Ancient Greece*, p. 186.

¹²⁴ Hippocrates, *Regimen in Acute Diseases* (LCL 148: 50, pp. 114–115, 50).

¹²⁵ Galen, *Mixtures (De Temperamentis)*, Book III, p. 162.

¹²⁶ Jacques & Allies, *Wine and Medicine in Ancient Greece*, p. 173.

¹²⁷ Jacques & Allies, *Wine and Medicine in Ancient Greece*, p. 190.

combinations of several drugs.¹²⁸ In *On Theriac to Piso*, the author states: ‘For you should know that when drugs are mixed, the power of each ingredient is no longer preserved remaining unchanged, and the same, and in no way altered, but there is a kind of unification of all the parts, the whole thing being mixed and a single new effect arising out of those others’.¹²⁹ For more on this topic, see Wilkins, *The Concept of Whole Substance in Galen’s Simple Medicines*.¹³⁰ See also the commentary to 1:11.

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References

- Al-Anṭākī, Dā’ūd ibn ‘Umar (d. 1599), *Tadkirat ūlī al-albāb wa-l-ġāmi‘ li-l-‘aġab al-‘uġāb*, Cairo, 1885.
- Arendonk, C. van, ‘Ḳahwa’, in *Encyclopaedia of Islam, Volume IV* (Iran-Kha), ed. Lewis, Pellat & E.J. van Donzel, Brill, Leiden, 1990.
- Al-‘Aydārūs, ‘Abd al-Qādir (1570–1628), *Kitāb al-Nūr al-sāfir ‘an aḥbār al-qarn al-‘āšir*, edited by Maḥmūd al-Arnā’ūt, Dar Sader, Beirut, 2001.
- Batali, Mackenzie E. Lim, Lik Xian, Liang, Jiexin, Yeager, Sara E., Thompson, Ashley N., Han, Juliet, Ristenpart, William D., Guinard, Jean-Xavier, ‘Sensory Analysis of Full Immersion Coffee: Cold Brew is More Floral, and Less Bitter, Sour, and Rubbery than Hot Brew’ in *Foods*, 11, Basel, Switzerland, 2022 (pp. 1–18).
- Biṭunā, Gabriel, ‘On Loaned Consonants in the Spoken Arabic of Siirt’, in *‘Āmmiyya and Fuṣḥā in Linguistics and Literature*, Romano-Arabica XIV, University of Bucharest Center for Arab Studies, 2014, pp. 77–87.
- Brain, Peter, *Galen on Bloodletting: A Study of the Origins, Development and Validity of his Opinions, with a Translation of the Three Works*, Cambridge University Press, Cambridge, 1986.
- Brockelmann, Carl, *Geschichte der arabischen Litteratur Bd. 2*, Brill, Leiden, 1949.
- Brockelmann & Vernet, al-Anṭākī, in *Encyclopaedia of Islam New Edition Online (EI-2 English)*, ed. P. Bearman, Brill, https://doi.org/10.1163/1573-3912_islam_SIM_0681, accessed 01 October 2025.
- Dozy, Reinhart Pieter Anne, *Supplément aux dictionnaires arabes, 2 éd.*, Brill, Leiden, 1927.
- Ellis, Markman, *The Coffee House: A Cultural History*, Weidenfeld & Nicolson, London, 2004.
- Fellmann, Irene, *Das Agrābādīn al-Qalānisi: quellenkritische und begriffsanalytische Untersuchungen zur arabisch-pharmazeutischen Literatur*, In Kommission bei Steiner, Beirut, 1986.
- Figuier, Louis, *Le savant du foyer ou Notions scientifiques sur les objets usuels de la vie* (Septième édition), Librairie Hachette Et Cie, Paris, 1876.
- Flannery, Michael, ‘Avicenna’, in *Encyclopaedia Britannica*, <https://www.britannica.com/biography/Avicenna>. Accessed 22 September 2025.
- Galen, *De curandi ratione per venae sectionem – On Treatment by Venesection*, in Brain, Peter, Galen on Bloodletting: A Study of the Origins, Development and Validity of his Opinions, with a Translation of the Three Works, Cambridge University Press, Cambridge, 1986.
- Galen, *Works on Human Nature, Volume I Mixtures (De Temperamentis)*, Cambridge University Press, Cambridge, 2018.
- Galenos (129-199), *On the Properties of Foodstuffs = De alimentorum facultatibus*, introduction, translation, and commentary by Owen Powell; with a foreword by John Wilkins, Cambridge University Press, Cambridge, 2003.
- Hammer-Purgstall, Joseph von, *Geschichte des osmanischen Reiches. Bd. 5, Vom Regierungsantritte Murad des Vierten bis zur Ernennung Mohammed Körpili’s zum Grosswesir, 1623–1656: Mit einer Karte, Pest*, In C. A. Hartleben’s Verlage, 1829.
- Hattox, Ralph S., *Coffee and Coffeehouses: The Origins of a Social Beverage in the Medieval Near East*, University of Washington Press, Seattle and London, 1985.
- Herin, The Domari Language of Aleppo (Syria), in *Linguistic Discovery*, Volume 10, issue 2 (2012), Dartmouth College, Dartmouth College Library, 2012, pp. 1–53.
- Hippocrates, *Regimen III, Aphorisms*, Translated by W. H. S. Jones. Loeb Classical Library 150. Cambridge, MA: Harvard University Press, 1931.
- Hippocrates, *Regimen in Acute Diseases*, Translated by W. H. S. Jones. Loeb Classical Library 148. Cambridge, MA: Harvard University Press, 1923.

¹²⁸ Nutton, *Ancient Medicine*, pp. 243–244.

¹²⁹ Leigh, *On Theriac to Piso, Attributed to Galen*, p. 119.

¹³⁰ J. Wilkins, The Concept of Whole Substance in Galen’s Simple Medicines, *Studia Ceranea* 11, 2021, pp. 479–491.

- Ibn Abī Uṣaybi‘a, *A Literary History of Medicine: Aḥmad ibn al-Qāsim (d. 1269 or 1270), A Literary History of Medicine: the ‘Uyūn al-anbā’ fī ṭabaqāt al-aṭibbā’ of Ibn Abī Uṣaybi‘ah Volume 3-2* Annotated English translation / edited and translated by Emilie Savage-Smith, Simon Swain, Geert Jan van Gelder; with Ignacio Sánchez, N. Peter Joosse, Alasdair Watson, Bruce Inksetter and Franak Hilloowala, Brill, Leiden, 2020.
- Ibn Ḡanāḥ, Abū al-Walīd Marwān, (ca 990-ca 1050), Marwān ibn Janāḥ: *On the Nomenclature of Medicinal Drugs (Kitāb al-talkhīṣ): Edition, Translation and Commentary, with Special Reference to the Ibero-Romance Terminology*, edited by Gerrit Bos, Fabian Käs, Mailyn Lübke, Guido Mensching, Brill, Leiden, 2020.
- Ibn Māsawayh, ‘Traité sur les substances simples aromatiques par Yohanna ben Massawaïh’, ed. P. Sbath, *Bulletin de l’Institut d’Égypte XIX*, Cairo, 1937, pp. 5–27.
- Ibn Sīnā, *Al-Qānūn fī l-Ṭibb, al-Ġuz’ al-awwal*, al-ṭab‘a al-ūlā, Dār al-kutub al-‘ilmiyya, Beirut, 1999.
- Jacques, Jouanna and Allies, Neil, ‘Wine and Medicine in Ancient Greece’, in *Greek Medicine from Hippocrates to Galen: Selected Papers*, edited by Philip van der Eijk, 173–194, Brill, Leiden, 2012.
- Jastrow, Otto & Talay, Shabo; mit Nikita Kuzin, *Der neuaramäische Dialekt von Midyat (Midyoyo), Band II: Glossar*, Otto Harrassowitz, Wiesbaden, 2024.
- Johnstone, Penelope, ‘Galen in Arabic: The Transformation of Galenic Pharmacology’, in *Galen: Problems and Prospects*, ed. Nutton, Vivian, The Wellcome Institute for the History of Medicine, London, 1981.
- Karababa, Eminegül & Ger, Guliz, ‘Early Modern Ottoman Coffeehouse Culture and the Formation of the Consumer Subject’, *Journal of Consumer Research*, Volume 37, Issue 5, 1 February 2011, pp. 737–760.
- Al-Kurdī, Muḥammad Ṭāhir ibn ‘Abd al-Qādir, *Adabiyāt al-Ṣāy wa-l-Qahwa wa-l-Dūḥḥān*, Al-Dār al-Sa‘ūdiyya, 1984.
- Leigh, Robert, *On Theriac to Piso, Attributed to Galen: A Critical Edition with Translation and Commentary*, Brill, Leiden, 2016.
- M. P., *A Character of Coffee and Coffee-Houses by M. P.*, London, 1661.
- McGinnis, Jon, *Avicenna*, Oxford University Press, New York, 2010.
- Mahamid, Hatim & Nissim, Chaim, ‘Sufis and Coffee Consumption’, in *Journal of Sufi Studies* 7, Brill, Leiden, 2018.
- Makris, Qus, in Bard, Kathryn A. & Shubert, Steven Blake (ed.), *Encyclopedia of the Archaeology of Ancient Egypt*, Routledge, New York, 1999, pp. 800–801.
- Al-Najjar, A., Dijkxhoorn, Y., Zubiry, R. & Ruben, R., *Understanding Coffee Farming Practices and Prospects in Yemen: Case Study from Bani Matar*. Report / Wageningen Economic Research, no. 2023-044, Wageningen Economic Research, Wageningen. <https://doi.org/10.18174/589422>, 2023.
- Nasrallah, *Annals of the Caliphs’ Kitchens: Ibn Sayyār al-Warrāq, al-Muzaffar ibn Naṣr, Annals of the Caliphs’ Kitchens: Ibn Sayyār al-Warrāq’s Tenth-Century Baghdadi Cookbook*, English translation with introduction and glossary by Nawal Nasrallah; Arabic text edited by Kaj Öhrnberg and Sahban Mroueh, Brill, Leiden, 2010.
- Noorlander, Towards a Typology of Possessors and Experiencers in Neo-Aramaic: Non-Canonical Subjects as Relics of a Former Dative Case, in *Studies in the Grammar and Lexicon of Neo-Aramaic*. Cambridge, UK: Open Book Publishers, 2021, <https://doi.org/10.11647/OBP.0209>, pp. 29–93.
- Nutton, Vivian, *Ancient Medicine*, Routledge, London, 2004.
- Al-Rāzī, *Al-Kitāb al-Hāwī fī l-ṭibb al-Ġuz’ 20. Fī l-adwiyā al-mufrada*, al-Ṭab‘ah 1., Hyderabad-Dekkan, 1967.
- Al-Rāzī, *Al-Kitāb al-Hāwī fī l-ṭibb al-Ġuz’ 15. Fī l-ḥumā al-muṭbiqa wa-al-amrāq al-ḥādda...*, al-Ṭab‘ah 1., Hyderabad-Dekkan, 1963.
- Robinson, E. F., *The Early History of Coffee Houses in England: With Some Account of the First Use of Coffee and a Bibliography of the Subject*. Kegan Paul, Trench, Trübner & Co., Ltd. Paternoster House, Charing Cross Road, London, 1893.
- Sacy, A. I. Silvestre de (ed.), *Chrestomathie arabe: ou, Extraits de divers écrivains arabes, tant en prose qu’en vers, avec une traduction française et des notes, à l’usage des élèves de l’École royale et spéciale des langues orientales vivantes*, Paris, 1826.
- Sacy, A. I. Silvestre de (ed.), *Chrestomathie arabe: ou, Extraits de divers écrivains arabes, tant en prose qu’en vers, avec une traduction française et des notes, à l’usage des élèves de l’École royale et spéciale des langues orientales vivantes*, Paris, 1806.
- Sezgin, Fuat, *Geschichte des arabischen Schrifttums*. Bd. 3, Medizin, Pharmazie, Zoologie, Tierheilkunde bis ca. 436 H, Brill, Leiden, 1970.
- Al-Suyūṭī (1445-1505), *As-Suyuti’s Medicine of the Prophet, may Allah bless him and grant him peace*, Ta-Ha, London, 1994.
- Tagliacozzo, Eric, Siu, Helen F. & Perdue, Peter C. (ed.), *Asia Inside Out: Changing Times*, Harvard University Press, Cambridge, Massachusetts, 2015.
- Tannahill, Reay, *Food in History*, New, fully rev. and updated ed., 1st American ed., Crown Publishers, New York, 1989.
- Totelin, L. M. V. ‘Therapeutics’, in P. E. Pormann (ed.) *The Cambridge Companion to Hippocrates*. Cambridge: Cambridge University Press (Cambridge Companions to Philosophy), (2018), pp. 200–216.
- Toussaint-Samat, Maguelonne, *A History of Food*, New expanded edition, Wiley-Blackwell, Chichester, West Sussex, U.K., 2009.
- [Anonymous,] *The Natural History of Coffee, Thee, Tobacco in Four Several Sections: With a tract of elder and juniper-berries, shewing how useful they may be in our coffee-houses: and also the way of making mum, with some remarks upon that liquor / collected from the writings of the best physicians, and modern travellers*, London, 1682.
- Ullmann, Manfred, *Handbuch der Orientalistik. Abt. 1, Der Nahe und der Mittlere Osten, Erg.-Bd. 6. Abschnitt 1, Die Medizin im Islam*, Brill, Leiden, 1970.

- Wilkins, J., 'The Concept of Whole Substance in Galen's Simple Medicines', *Studia Ceranea* 11, 2021, pp. 479–491.
- Witkam, J. J., *Inventory of the Oriental Manuscripts of the Library of the University of Leiden, Vol. 2. Manuscripts Or. 1001-Or. 2000*, Leiden, 2007.
- Yaltkaya, M. Şerefeddin. 'Kahveye dair bir türk hekiminin şahsı mütalâaları', *Türk Tıp Tarihi Arkivi* 2, no. 5 (1937), pp. 3–8.
- Zack, E. W. A., *Egyptian Arabic in the Seventeenth Century: A Study and Edition of Yusuf al-Magribi's 'Daf al-isr an kalam ahl Misr'*, [Thesis, fully internal, Universiteit van Amsterdam], LOT, Utrecht, 2009.