Medical translations from Greek into Arabic and Hebrew

Elaine van Dalen

Published online on: 10 May 2021

How to cite: Elaine van Dalen. 10 May 2021, Medical translations from Greek into Arabic and Hebrew from: The Routledge Handbook of Translation and Health Routledge

Accessed on: 05 Dec 2023

1

Medical translations from Greek into Arabic and Hebrew

Elaine van Dalen

This chapter will consider a wave of Greco-Arabic translations that experienced their peak in the ninth century CE, and the Arabic-Hebrew translations that took place in the 12th and 14th centuries. The two movements had wide-ranging implications for medical research and practice both during their own era and subsequent ones. The chapter will briefly discuss the methods and techniques of pioneer translators such as al-Bīṭrīq (active around 800), as well as those of the prolific translator Ḥunayn ibn Ishāq (809–873) and his colleagues, including his son Ishāq ibn Ḥunayn (c.830–c.910) and nephew Ḥubaysh ibn al-Ḥasan (died in late ninth century). In addition, the chapter will introduce leading views on the increased demand and production of medical translations between the 8th and 10th centuries, highlighting practices of patronage that involved both wealthy families and the caliphs. It will also explain patrons’ and translators’ preferences for particular Greek medical texts, and the influence of translations on medical education and scholarship. Lastly, the chapter will look at the practices of Hebrew translation in Italy and Southern France, including the work of the Tibbonide family, Shem Tov ben Isaac (born in 1196) and Nathan ha-Me’ati (1279–1283), and discuss the role of medical translations in Jewish communities in Southern Europe.

1 Greco-Arabic translations: beginnings

The majority of translations from Greek into Arabic in the Middle East were conducted in the 7th to 10th centuries CE, in an era characterised by wide-ranging political and linguistic reconfigurations. The Arabs, arriving from the Arabian Peninsula, established vast empires that stretched from Southern Europe and North Africa to the Middle East and South East Asia, regions previously ruled by the Byzantines and the Persian Sassanid dynasty. The scholarly languages in these regions had been predominantly Syriac, Greek and Persian, and this did not change immediately. Syriac, a dialect of Aramaic, was an important language among Christian intellectual communities in late antiquity. In the centuries prior to the Muslim conquests, Syriac scholars translated Greek works into Syriac and produced Syriac scholarship (Tannous 2010). Such activities continued, as will
be illustrated below, after the conquests. Gradually, the use of Arabic spread; it officially replaced Greek as an administrative language in the 7th century, and increasingly took the place of Syriac and other languages as the main scholarly language in the 9th and 10th centuries. With this Arabisation came the demand for Arabic translations of scholarly texts written in Greek, Syriac, Persian and other languages.

The first of these Arab empires, the Umayyad Empire, lasted from 661 until 750 and had its capital in Damascus in modern day Syria. Not many translations into Arabic were produced during this time, possibly because Greek and Syriac continued to be used by intellectuals even though Arabic had been made the official administrative language. The main translations from this era that are alluded to in Classical Islamic records are alchemical texts. According to the bookseller Ibn al-Nadîm (died c. 995 CE), the first Umayyad caliph Mu‘âwiya, who ruled between 661–680, asked a group of Egyptian scholars to translate alchemical works from Coptic and classical Greek (Ibn al-Nadîm 1970: 581; Saliba 2007: 45). Medical books seem to have been sporadic among these Umayyad translations. According to the Islamic scholars Ibn Juljul and Ibn al-Qiftî, an 8th-century Jewish scholar called Mâsarjawayh translated a Syriac medical compendium, written by the Christian Ahrun ibn A‘yun, into Arabic during the reign of the Umayyad caliph ‘Umar ibn ‘Abd al-‘Azîz (ruled 717–720) (quoted in Van Koningsveld 1998: 351–352). Most Greco-Arabic translations however took place in later eras, after the ‘Abbasids took over from the Umayyads in the 750s.

2 Medical translations in the ‘Abbasid Empire

In the 750s, a revolution brought a new family into power in the Middle East, the ‘Abbasids. They founded a new capital, called Baghdad, in what is today’s Iraq, which had a more central location than the previous capital Damascus. The early ‘Abbasid Empire flourished politically and economically, and brought together Persians, Syrians, Copts, Arabs and others. Although each of these groups had their own language, Arabic became increasingly important as a unifying political and scholarly language, much more so than during the Umayyad Empire. This era was characterised by a large-scale translation effort originating in Baghdad, and the most commonly translated languages were Persian, Syriac, and Greek. Translators from Greek first focused on medicine and applied sciences such as astrology and geometry, later followed by philosophy. By the end of the 10th century, translators had rendered nearly all available Greek works of science, medicine, and philosophy into Arabic.

The need for translations can be seen as a sign of flourishing scholarship at the time. The medical translations were often made by scholars who were themselves trained physicians and therefore familiar with many of the concepts in the texts. A prolific translator at this time was Ḥunayn ibn Ishâq (died around 873), a Syriac speaking Nestorian Christian who learnt Greek. He was himself a physician who practised medicine and translated Greek medical texts into Syriac and Arabic with his son Ishâq ibn Ḥunayn (died 910), nephew Ḥubaysh ibn al-Ḥasan (active around 860), and other colleagues.

According to a legend, the activities of these translators began after caliph al-Ma‘mûn (ruled 813–833) had a dream about Aristotle. The historians Ibn al-Nadîm (died 990 CE) and Ibn Ābi Uṣaybi‘a describe how, in his dream, al-Ma‘mûn asked Aristotle what the ultimate good was, to which Aristotle replied, ‘that which is considered good to reason’. He explained this as meaning ‘that which is considered good by law’, which in turn means ‘that which people consider good’. Ibn al-Nadîm further recounts that this dream led al-Ma‘mûn to contact the king of Byzantium and ask permission to send a group of
scholars to procure books treasured in Byzantium. After these books were brought back, al-Maʿmūn ordered them to be translated (Dodge 1970; Saliba 1970: 48; Gutas 1998; Van Koningsveld 1998: 356). Another account claims that caliph ʿUmar ordered all the books in Alexandria to be destroyed when he conquered Egypt.¹

These legends make it appear as if the translation efforts were an attempt to import books to an empire which was alien to these scholarly traditions. In fact, however, many of the medical books that were present in the region before the conquests could still be found there under Umayyad and early ʿAbbasid rule, and Alexandrian practices of medical scholarship continued in the early Islamic world. In 6th- and 7th-century Alexandria, scholars such as Palladius, John of Alexandria and Stephen of Athens produced medical commentaries that offered interpretations of earlier Galenic and Hippocratic material. They moreover worked in an academic environment where medicine was taught using a particular collection of Galenic and Hippocratic texts, which became known as the Alexandrian curriculum. These included four works of Hippocrates, four Aristotelian works on logic (the first four of the Organon) and the Sixteen Books of Galen, including On Sects, On the Art of Medicine and On the Pulse for Beginners. Early translators such as Yahyā ibn al-Ḥārīq (died in early 9th century) and his father al-Ḥārīq (died around 800) had started translating some of these books into Arabic already before Maʿmūn’s mission to Byzantium. A few decades after this mission, the translator Ḥunayn ibn Ishāq recounts in a letter² addressed to his patron ʿAlī ibn Yahyā how he searched widely for copies of Greek manuscripts in the former Byzantine cities which were now part of the Islamic Empire, such as Alexandria and Damascus. Ḥunayn mentions that it was easier to find manuscripts of Galenic texts that were part of the Alexandrian curriculum than of texts that were not; for example, the manuscript of On the Therapeutic Method was difficult to locate ‘as it was not read in the school of the Alexandrians’, according to his comments (Lamoreaux 2016: 48). This illustrates that, rather than having been destroyed with the conquests as the myth of caliph ʿUmar suggests, many of the Greek medical and philosophical books central to late-antique Alexandrian medical scholarship continued to be present and possibly used in the early Islamic world, and they did not all have to be brought from Byzantium. Not only were these works still available in Greek, many of them also circulated in the region in Syriac translations.

Ḥunayn and his colleagues followed in the steps of Syriac scholars who had translated Greek texts into Syriac in previous centuries. An example of these earlier translation activities is the work of Sergius of Resh ʿAyna (died 536), who translated Galen’s Ars Medica (also known as the Tegni or Microtegni), the second of Galen’s Sixteen Books, into Syriac. Such activities continued after the Muslim conquests with the work of Christian scholars such as Jacob of Edessa (died 708) and Ḥunayn himself, who often first translated texts into Syriac and used them as an intermediary to then translate into Arabic. For instance, Ḥunayn retranslated the Ars Medica into Syriac three centuries after Sergius’ translation and then also rendered the work into Arabic (Tannous 2010). When studying the Greco-Arabic translations, it is important therefore to keep the central role of Syriac in mind.

3 Patronage

Translations produced in this time period were the result of well-organised efforts supported by statesmen and elite families, and executed by highly skilled translators. According to Dimitri Gutas, the ʿAbbasid caliphs supported the translations partly out of ideological concerns, seeking political legitimisation by adopting the
intellectual traditions of the Sassanid Empire that they replaced (Gutas 1998). He further demonstrates that members of the elite paid for translations as they could benefit from them practically. A quote from the Andalusian physician Ibn Juljul (c.944–c.994), where he argues that scholars appear only in states whose kings seek knowledge (Vernet 2008), seems to support this view. On the other hand, George Saliba suggests that it was middle-class administrators competing for governmental positions who were responsible for the increase in translations (Saliba 2007).

We can get an insight into the role of the elite in supporting the translation movement from Ḥunayn’s Epistle. In this text, Ḥunayn also gives information about his patrons, who were either related to the ‘Abbasid court or were themselves physicians who wished to enhance their medical knowledge, such as the Bukhtishū’ dynasty. This prominent family of physicians spanning six generations over 250 years commissioned medical texts such as Galen’s Book on the Method of Healing. So did the Banū Mūsā, another family with close ties to the caliph. The caliphs themselves also commissioned translations and patrons generally supported multiple translators. Jibrīl Bukhtishū’ (died 828), for instance, paid both Ḥunayn and Job of Edessa (died around 835), another translator of Greek into Syriac. Ḥunayn further reports that at least five other patrons supported him, both Christian and Muslim, physician and courtier. Some works he would first translate into Syriac for one patron and then into Arabic for another, as he did for example with Galen’s works Pulse to Teuthras and Therapeutics to Glaucon. This patronage contributed to the large number of translations created in this era.

4 Translation techniques

Different translators adhered to different approaches in their medical translations. The historian al-Ṣafadī describes two main strategies, one he characterises as word-for-word translation (ad verbum) and the other as focusing on the meaning of the entire sentence (ad sensum) (Rosenthal 2003: 17). Al-Ṣafadī mentions the translator Yaḥyā ibn al-Bīṭrīq as an example of the first approach. The reputation of this translator was generally not positive (Ullmann 2002–2007: 28–48). His versions were word-for-word translations that did not always pay enough attention to the meaning of the sentence. Manfred Ullmann identified his father, Abū Yaḥyā al-Bīṭrīq, as the translator of an early version of the Aphorisms, of which the later translator Ḥunayn disapproved (Ullmann 2002–2007: 52–53). These early translators were nevertheless pioneers who did important work in developing Arabic medical terminology. According to al-Ṣafadī, Ḥunayn ibn Ishāq translated by first grasping the meaning of a sentence and subsequently rendering it into Arabic (or Syriac). Ḥunayn’s translation approach was precise and had a reputation among historical scholars for being ‘without error’ (Rosenthal 1946: 254), even though he himself thought it necessary to retranslate several of his earlier translations. He would follow particular strategies to render linguistic features such as conjunctions, conditionals, and subjectivity (Vagelpohl 2011; Overwien 2012, 2015; Van Dalen 2017). For instance, when he considered a sentence to be the reflection of Galen’s own views, he would clearly mark this subjectivity by using first-person active voice where Galen had used a passive. He was also aware of the fact that the text was written in a Greek cultural context; when Galen used ‘we’ as a reference to a general subjectivity, Ḥunayn rendered this as ‘the Greeks’ (Van Dalen 2017). His nephew Ḥubaysh’s language has been characterised as ‘translation Arabic’, a language that demonstrates clear influence of the source language (Rosenthal 1946: 253).
Another issue Arabic translators dealt with was the polytheistic nature of the texts they translated in a predominantly monotheistic culture. This had consequences for instance in translated references to the Greek gods and can be seen in the way the Hippocratic Oath was translated into Arabic. The beginning of the Greek version of this oath reads in English translation as: ‘I swear by Apollo the physician, and Asclepius, and Hygieia and Panacea and all the gods and goddesses as my witnesses, that, according to my ability and judgement, I will keep this Oath and this contract’ (for the Greek see Littré 1844: 628–633).

In the Arabic this has become: ‘Hippocrates said: I swear by God, the Lord of Life and Death, Giver of Health and Creator of Cures and Treatments; and by Asclepius, and by all men and women who are close to God and whom I take as witnesses’ (Savage-Smith, Swain and Van Gelder 2020: 4.1.3.1). In this translation, the gods and goddesses have become ‘men and women close to God’, and Apollo, Hygieia and Panacea have disappeared. Instead, the translator has included the monotheistic God, and only Asclepius remained (see also Pormann and Savage-Smith 2007: 33; for more examples see Picken 2018: 104).

In terms of vocabulary, Ḥunayn and his colleagues drew on contemporary medical terms but also had to create new words to translate Greek terms. They sometimes Arabised words by transliterating them in Arabic script, and occasionally added explanations of their meaning to the translation. In other cases, they used Syriac words that we assume were known to contemporary readers. Sometimes Ḥunayn described the meaning of a Greek term with multiple Arabic words (for examples see Picken 2018: 103–104; Overwien 2012: 156–157; Cooper 2016: 12–23). As medical scholarship progressed, some terms were adopted and others were re-interpreted.

5 Translations and scholarship

Medical translations had great impact on medical scholarship in the classical Islamic world. Through the translation efforts that started in Baghdad, all of the Alexandrian curriculum was made available in Arabic and became required reading for medical students (Iskandar 1976). Not only did Islamic physicians follow Alexandrian educational practices, they also adopted late-antique genres such as the medical commentary, and adhered theoretically to what has been described as Galenism more broadly (Temkin 1973). Greek works had competed in the beginning with translated Persian and Sanskrit texts, some of which had themselves adopted the central premises of Greek medical thought. The physician Ḥālid Rabbān al-Ṭabarī (838–870), for instance, draws from Persian texts and translations of Sanskrit texts in his medical encyclopaedia Paradise of Wisdom. We also find quotes from Persian and Sanskrit texts in al-Rāzī’s Comprehensive Book of Medicine, the Kitāb al-Ḥāwī (Kahl 2015). Generally, however, interest in medical texts was very much directed at the Greek physicians Hippocrates and Galen. For example, the largest part of Ḥunayn’s translations consisted of Galen’s texts, and he lists over 100 of Galen’s works that he translated in his Epistle.

One way to study the impact of the translations on medical scholarship in the classical Islamic world is to analyse Arabic commentaries on Greek works. A good example of such commentaries are those on the Aphorisms, one of Hippocrates’ most influential medical works. It is a collection originally written in Greek consisting of seven books of short medical verses, the first of which opens with the well-known phrase ‘life is short, art is long’. The Aphorisms was first translated into Syriac and Arabic, and later into Latin and Hebrew. Its popularity in teaching and research is evidenced by the large amount of surviving manuscripts, which number over 70 in Arabic (Magdelaine 1994: 87), in addition to their
transmission in the numerous commentaries on the *Aphorisms* in which they are quoted. These commentaries illustrate the importance of the text for teaching and research. Over 20 Arabic commentaries on the *Aphorisms* written over six centuries are known, at least 15 of which have survived to this day. The commentators, all of them physicians, did not only rely on Hunayn’s translation of the text, but also on his translation of Galen’s commentary of it. Even if direct quotations from that text decrease over centuries (Karimullah 2017), Galen’s exegetical format was constitutive of the tradition and his theoretical framework remained influential throughout each commentary. Adopting and occasionally rejecting Galenic theory allowed Islamic physicians to make numerous innovations in the exegesis of the Hippocratic source text (Van Dalen 2020). At the same time, one should keep in mind that the Greco-Arabic scholarship only represents the theoretical medicine at the time. Medical practices were probably not always aligned with what has come down to us in the written traditions (Álvarez-Millán 2010, 2000; Pormann and Savage-Smith 2007: 144–162).

For contemporary scholars, the Arabic translations are valuable witnesses of the Greek texts. For example, Galen’s commentary on the Hippocratic *Epidemics*, the largest commentary on a Hippocratic work, is only extant in its Arabic translation (Vagelpohl 2011). In other cases, the Arabic translations offer comparative material to Greek texts which are extant in later or sometimes deficient Greek versions.

### 6 Translations from Arabic into Hebrew

After the ‘Abbasids took over from the Umayyads, the Umayyads founded an emirate in Andalusia in 756. After this, Arabic scholarship began to diffuse into Islamic Spain, where medical scholarship continued in conversation with research done in the Islamic East over the following centuries. From here, Arabic texts also made their way to Southern France and Italy in the 12th century, where they were translated into Latin and Hebrew. The Arabic-Hebrew translation period lasted approximately 300 years between 1100–1400, with its peak in the 13th century. Although these efforts took place on a much smaller scale than the Greco-Arabic translations in Baghdad, they had a large impact on Hebrew scholarship. Translators first focused on Jewish Arabic works in the fields of grammar and theology, and then moved on to philosophy and medicine, where they translated original Arabic works such as Ibn Sīnā’s (*c*.980–1037, known in Latin Europe as Avicenna) *Canon of Medicine* (hereafter *Canon*), and Arabic translations of Greek works, such as Hippocrates’ *Aphorisms* and Galen’s *Microtegni*. Moritz Steinsechneider listed most of these works in his monumental *Die Hebräischen Übersetzungen des Mittelalters und die Juden als Dolmetscher* (The Hebrew Translations of the Middle Ages and the Jews as Interpreters, Steinsechneider 1893). Most of these translation activities took place in Southern Europe, especially in Toledo and Barcelona (Christian Spain), cities in Southern France such as Marseille, Lunel and Montpellier, and in Naples (present-day Italy).

In the 12th century, Andalusian Jews fled to Southern France from persecution by the Almohad Caliphate, bringing with them knowledge of Arabic language and scholarship. One of these emigrants was Judah ibn Tibbon (1120–1190), a physician born in Andalusia (Granada), who settled in the French city of Lunel. His descendants, known as the Tibbonides, became a famous family of physician-translators who lived and worked in Southern France and began the Arabic-Hebrew translation movement. They based their translations directly on Arabic sources, including many Arabic translations of Greek medical texts. Judah Ibn Tibbon’s son Samuel ibn Tibbon (1150–1232) translated Galen’s *Microtegni* in 1199. Gad Freudenthal has confirmed that he also translated the popular
commentary on this text by ʿAlī ibn Riḍwān (Freudenthal 2016: 38–41). His son Moses ibn Tibbon, who was active between the years 1240 and 1283, translated medical works by Ḥunayn ibn Ishāq, al-Rāżī and Ibn Sīnā (Lindberg 1980: 69).

There were multiple reasons for these prolific Arabic-Hebrew and Latin-Hebrew translation activities in Southern Europe, and especially in Southern France. According to scholars such as Friedenwald and Steinschneider, the movement indicates the scientific interest of Jewish physicians who wanted to increase their medical knowledge (Friedenwald 1934: 88). At the end of the 12th century, there were almost no Hebrew medical books in Southern France, as the medical scholarship available at the time was either in Arabic or in Latin translations of Arabic texts. The Jewish communities in Southern France were not proficient in Arabic or Latin, the language of the elite, and aspiring Jewish physicians were generally not allowed into Latin medical schools. The translator Salomon b. Abraham ben Daud (c.1110–1180), quoted by Steinschneider, noted that this shortage led him to translate two ‘splendid ones’, one text by Averroes and one by Ibn Sīnā (Steinschneider 1893: 672; also in Friedenwald 1934: 88; and compare with Ferre 1998). The fact that Jewish scholars did not have access to libraries and books while their Christian colleagues did, gave Christian physicians considerable advantage. The anonymous translator who used the pen name Doeg the Edomite (12th century), as well as Shem Tov of Tartosa (born 1196) explain that they translate in order to give Jewish physicians the opportunity to compete with Christian physicians (see Barkai 1998: 18–22). Both translators observe a tendency among Jewish people to consult Christian doctors, who were ahead of their Jewish counterparts, and therefore ended up taking non-kosher prescriptions (Barkai 1998: 18–22 and Bos 1998: 102–103). Aside from the risk of non-kosher treatment, another motivation was the desire to demonstrate that Hebrew scholarship was not inferior to Latin or Arabic, as the Jewish community was frequently scorned for its lack of literature (Steinschneider 1893: vii; Friedenwald 1934: 88; Bos 1998: 102; Barkai 1998: 18–22). The translator Nathan ha-Me’ati for instance explains that ‘[in response to] the contempt in which learnt Christians hold the Jews because the medical works of Solomon and their later writers have been lost, he wished to follow the example of the Tibbonides who had drawn up the books from the marsh and the well of the Arabic language’ (Friedenwald 1934: 88).

The translation activities also spread to Italy. Nathan Ben Eliezer ha-Me’ati was a translator who worked in Rome in the last decades of the 13th century, best known for his translation of Ibn Sīnā’s Canon. He translated medical works from Arabic to Hebrew, but unlike the Tibbonides who were native Arabic speakers, Nathan ha-Me’ati learnt Arabic during his travels in Arab-speaking lands, as he says in his translation of the Canon (cf. Bos 2013: 307). He also translated the Hippocratic Aphorisms as part of his translation of Maimonides’ commentary on this text, and Hippocrates’ On Acute Diseases and Airs, Waters, Places, including Galen’s commentary on the latter. This commentary had been translated into Arabic by Ḫubaysh ibn al-Ḥasan.

7 The role of Latin

In addition to the Arabic-Hebrew translations, some of these translators used Latin versions of Arabic originals as their source texts, for example al-Jazzār (c.895–979) and Zād al-Musāfīr, and of Arabic translations of Greek texts, such as the early translations by Doeg. Between the years 1197–99, Doeg translated 24 medical texts from Latin into Hebrew, which included 17 works on medical practice and seven on theory. These included a Latin translation of Ḥunayn’s introduction to Galen’s Ars Medica, which he called Sefer
Ḥaguan (Book of Hunayn), Galen’s Ars Medica itself, Hippocrates’ Aphorisms and the Prognostics (Freudenthal 2013). While these works were normally inaccessible to Jews, Doeg was allowed to obtain Latin texts as a convert to Christianity, albeit one who later repented of his conversion. Many of these texts were also translated from their Arabic versions. The Latin texts with which Doeg worked were sometimes abbreviated, which was the main reason why Moses ibn Tibbon decided to retranslate texts from Arabic that Doeg had already translated from Latin (Freudenthal and Fontaine 2016: 17). Doeg also used technical terms in the language of the gentiles, i.e. the Romance vernacular which was not widely understood among the immigrant communities of Jewish refugees from Andalusia in Southern France. When Moses translated the text again, his version exceeded the popularity of Doeg’s translation.

8 Major medical works translated into Hebrew

Many texts of Galen’s corpus were translated into Hebrew (Lieber 1981). The Galenic work Ars Medica, which, as we saw above, was translated into Syriac and Arabic to feature centrally in Islamic medical education and scholarship, was translated into Hebrew three times. Two of these were translated from Latin, first by Doeg and again in the 13th century by Hillel ben Samuel, who used a Latin version by Gerard of Cremona, which in turn was based on an Arabic translation that included Ibn Ridwān’s commentary on the text. The third Hebrew translation from the 12th century was the work by Samuel ibn Tibbon and was based on an Arabic text which had been translated from Greek by Ḥunayn. Galen’s Microtegni was called Melakah getanah (Small Art) in Hebrew, a translation of the Arabic title as-Ṣīnā’a as-Ṣağīra (The Small Art), and known in Latin as the Ars Parva. Samuel ibn Tibbon’s translation of this text survives in nine manuscripts, of which three are incomplete (Freudenthal and Fontaine 2016: 18). Samuel’s translation also included Ibn Ridwān’s commentary. In the Microtegni, Galen sets out the main principles of the art of medicine, and the text functioned as an introduction for medical students in the Islamic world as well as in later Latin and Jewish communities. The Egyptian physician Ibn Ridwān (988–1061/8) glossed it passage by passage and his commentary often accompanied the Ars Medica in Hebrew translation as was the case in both Samuel ibn Tibbon’s and Hillel ben Samuel’s later versions, becoming an important element in Jewish medical education.

Ḥunayn, who translated the Ars Medica into Syriac and Arabic, added his own introduction to the text known in Arabic under two titles, the Introduction to Medicine (al-mudkhal fi t-tibb) and the Questions into Medicine (al-Masāʾ il fi t-tibb), which has led to confusion about whether these were two different texts (Brockelmann 1897: 224) or one and the same work (Iskandar 1978; Ferre 1995: 44; Sezgīn 1970: 249–250). Iskandar has shown that shortly after the work was produced, scholars started to use two titles to refer to the same work, the first derived from the work’s content and the second from its form (Iskandar 1978). The text was translated into Hebrew multiple times, usually entitled Sefer mavo le-malakhat ha-refu’a (Book on the Introduction to the Art of Medicine, Ferre 1995: 42). A shortened version of the work was also translated into Latin and became immensely popular under the name Isagoge ad tegni Galeni (Introduction to Galen’s Tegni). Lola Ferre suggests that the diverse translations and large quantity of manuscripts of Ḥunayn’s Introduction indicate that the text was popular among Jewish physicians (Ferre 1995: 52).

Ibn Sīnā’s Canon, one of the major medical encyclopaedias produced in the classical Islamic world, became widely disseminated among European Jewish and Latin
Greek into Arabic and Hebrew

communities. More than 100 manuscripts of the Hebrew translations survive worldwide, which indicates its popularity among Jewish physicians. Nathan ha-Me’ati made the first translation of the complete work into Hebrew in 1279 in Rome, a hundred years after its translation by Gerard of Cremona into Latin. Zerahiah ben Isaac ben Shealtiel Gracian of Barcelona made another translation around 1280, correcting errors in the first two books of Nathan ha-Me’ati’s translation. Finally, Joshua Lorki made further corrections of Nathan’s translation of these first two books in 1402 (Bos 2013: 310). According to Bos, a Hebrew translation of the Canon printed in Naples in 1491 included all three of these translations of the first two books, together with further editions by 15th-century translators (Bos 2013: 310; Singer and Rabin 1946: lxvi).

As was the case in the Islamic world the Aphorisms were of great importance in European medical scholarship. Steinschneider lists multiple translations of the Aphorisms into Hebrew under the name Perakim, most of which are part of translations of commentaries on the Aphorisms, for instance that of Maimonides or that of Galen (in Arabic). Nathan ha-Me’ati translated them as part of Galen’s commentary on the Aphorisms, using Hunayn’s Arabic translation of the original Greek text (Steinschneider 1893: 659). Moses ibn Tibbon translated the Aphorisms as quoted in Maimonides’ commentary on the text. Both Hebrew translations of the Arabic Pseudo-Palladius commentary (see next paragraph) include two separate translations of this Hippocratic collection.

Just as some Arabic translations are important witnesses to Greek texts, the Hebrew translations become witnesses for Greek or Arabic texts. This is the case for instance with the 9th-century Arabic version of Palladius’ commentary on the Aphorisms, of which only the first two books are extant in an Arabic manuscript. Fortunately, the full seven books survive in a 13th-century Hebrew translation by Shem Tov ben Isaac of Tartosa (on this commentary see Pormann et al. 2017). Another example is the translation of Hippocrates’ De superfoetatione (On superfetation), which an anonymous translator rendered into Arabic in a poor-quality translation. A later anonymous Hebrew translation of the Arabic text is a valuable witness that helps us to further understand the extant versions of the Greek source text (Zonta 2003). Some Arabic texts only survive in Hebrew translation. An example of this is ar-Razi’s Arabic treatise on why many people become medical charlatans, which Nathan ha-Me’ati translated into Hebrew in Rome in the 13th century (Steinschneider 1866; Bos 2013: 308; Pormann 2005).

9 Hebrew translation techniques

Just as Arabic translators before them, Hebrew translators had to develop new Hebrew vocabulary to render medical terminology. They resorted to Biblical and Rabbinical Hebrew terms and used loan translations, employing existing Hebrew terms with a different meaning. They also created neologisms, used transliterations of Arabic and Romance words, or explained terms (see for instance Zonta 2003, Bos 2008 and 2013, and Ferre and Martinez Delgado 2015). Ferre has drawn attention to the fact that not all translators had the necessary language skills, and some were physicians who felt ill prepared for translation (Ferre 1998). This is illustrated by a quote from Samuel Ben Judah, saying ‘I have left many places blank and free of one or more words and lines because of my limited knowledge and insufficient grasp of the Arabic language in addition to its uncommon subject matter’ (Berman 1967: 305). In turn, both he and his son Samuel ‘criticised their rival translators for subordinating meaning to language and style, failing to accurately reproduce difficult philosophical notions in their paraphrastic
translations’ (Robinson 2005: 822). Shem Tov in the introduction of his translation of the Arabic Pseudo-Palladius commentary (written in 1268) apologises that he translated this text when he was old, which may have led to errors (Pormann et al. 2007: 303). This is not to say that the translation is of poor quality; in fact, it follows the Arabic closely. An anonymous translator made a different Hebrew translation of the same Pseudo-Palladius commentary which is preserved in Vatican Library manuscript ebr.567, perhaps because they disliked the first translation, but no evidence for this exists. The medical vocabulary of these two translations differs in some instances.

10 Future directions

Each of the different aspects of medical translation into Arabic and Hebrew introduced in this chapter represent avenues for further research. For instance, we can learn more about how medical translations influenced medical research, and how evolving medical understanding affected the use of medical terms that had entered medical discourse during the translation period. In terms of translation technique, the work that has been done on some Greco-Arabic translators can be expanded further to include more translators and translations, and also to make comparisons with contemporary translations from other languages such as Persian. The same goes for the translation techniques in translations into Hebrew, and the effects of those translations on scholarship. These medical translations offer rich sources for the study of the development of medieval scholarly Hebrew. Some of the work ahead is of a philological nature, as many translations are preserved in manuscripts that have not yet been edited and have unidentified authorship. Here scholars first need to engage in textual criticism before they can continue to address questions of translation techniques and impact, while knowledge of such techniques also aids in the establishing of the text and authorship attribution.

11 Conclusion

The translations discussed in this chapter show the relationship between medical scholarship and translation in the Middle East and Europe throughout history. On the one hand, the presence of committed medical scholars and intellectual activities in both Baghdad and Southern France required translation activity in places where the use of language had changed. On the other hand, these translations also encouraged such activities and stimulated medical scholarship to an unparalleled extent. In Southern Europe, Jewish physicians were able to access Arabic texts in Hebrew translations which their Christian colleagues had already been able to use in Latin translation. This in turn allowed them to provide medical services to Jewish patients who previously may have relied on Christian physicians. Where in the case of Southern France, scholarly works were imported from Andalusia and tended to be new material for the Jewish communities, the situation was different in the classical Islamic world. Here, unlike myths such as those about caliph al-Ma’mūn that made it seem that the medical scholarship was foreign to the new Islamic Empire, the medical texts were already present inside the ‘Abbasid Empire in the ancient centres of learning, such as Alexandria and Damascus, and physicians in the region had already been using them in Greek and Syriac. The Arabic translations thus enabled a continuation of medical practices rather than the import of a new tradition. Greek medical texts, especially those that were part of the so-called Alexandrian curriculum, became of central importance in classical Islamic medical education. Medical students in Baghdad
studied the works of Hippocrates and Galen in Arabic with their teachers, and physicians used them as reference works and also contributed to them with new medical findings presented for instance in commentaries, such as those on Hippocrates’ *Epidemics* and *Aphorisms*. Greek medical ideas, such as Hippocrates’ humoral pathology and Galenic physiology, continued to be influential in the region through the translation of Greek texts and the inclusion of this translated material in new Arabic scholarship. Islamic scholars incorporated this material, sometimes improving on the Galenic theories and at other times rejecting them completely when new empirical evidence turned out to contradict them. The medieval translations of Arabic medical texts and Arabic translations of Greek medical texts into Latin and Hebrew made this scholarship accessible to European students and practitioners of medicine.

**Notes**

1. According to this myth, which is most completely narrated by the historian al-Qịfaṭ (died 1248), ʿUmar ordered his commander ʿAmr ibn al-ʿĀṣ to destroy all ancient books found in the libraries of Alexandria. Cf. Van Koningsveld (1998) p. 364.
2. The *Risāla* in Arabic, edited and translated into English in Lamoreaux (2016).
3. Galenism refers to a set of Galenic medical theories, concepts and methods that characterised medicine in late antiquity, the Islamic world, and Europe.
5. All of these have been edited by Pormann *et al.*, University of Manchester.
7. For a list of extant manuscripts of the *Canon* in Hebrew translation see Richler (1981: 145) and Bos (2013: 39).

**Further reading**


Gutas discusses translation activities in classical Baghdad from a social perspective, focusing on translators and patrons, and offers explanations for the surge in translations in this era.


This work provides students with an introduction to Islamic medicine, covering topics such as medical theory, everyday medical practice and prophetic medicine.


This book offers different explanations for the beginnings of the translation activities in the classical Islamic world, as well as a discussion of the influence of Islamic astronomy on European scholarship.


Shatzmiller provides students with an introduction of medical practices among Jewish people in medieval Europe.

**Related topics**

Dissemination of Academic Medical Research Through Translation, Translations of Western Medical Texts in East Asia, Medical Terminology and Discourse
References
Cooper, G. (2016) ‘Ḥunayn ibn Ishāq’s Galen Translations and Greco-Arabic Philology: Some Observations from the Crises (De crisibus) and the Critical Days (De diebus decretoriis)’, *Orients*, 44, pp. 1–43.
Freudenthal, G. (2016) ‘Samuel ibn Tibbon as the Author of Melākah qetānah, the Hebrew Translation from Arabic of Galen’s Tegni’, *Arab Sciences and Philosophy*, 26, pp. 27–43.
Greek into Arabic and Hebrew


