# **Asclepius: Cult and Medicine**

#### Florian Steger<sup>1,2</sup>

- 1 Ulm University, Institute of the History, Philosophy and Ethics of Medicine Parkstrasse 11, 89073 Ulm, Germany
- 2 FSAEI HE I.M. Sechenov First MSMU MOH Russia (Sechenov University) 8 Trubetskaya St., building 2, Moscow 119991, Russia

Corresponding author: Florian Steger (florian.steger@uni-ulm.de)

#### Received: 20 May 2019 Accepted: 5 September 2019

**Citation:** Steger F (2019) Asclepius: Cult and Medicine. History of Medicine 6(3): 176–187. https://doi.org/10.17720/2409-5834.v6.3.2019.08h

#### Abstract

Asclepius can claim to have the most important cult among forms of healing shaped by ritual and cult. In Antiquity, he was venerated in the sanctuaries of Asclepius where patients respectively worshippers were cared for. The Asclepian healing cult included sacrifices, ablutions and incubation. In their dreams, the patients received therapeutic instructions. But not only miraculous cures occurred in the Asclepieia, nor were these sacred sites the last refuge of the seriously ill. Using written and iconic sources a genuine medicine of Asclepius has to be described which was characterized by healing-cult ritual actions and medical therapy parts. Thus, based on the example of Asclepius, the proposition that healing art tries to establish a harmonization of natural and supernatural reality in a religious context can be confirmed. The medicine of Asclepius clearly formed an integral part of a multifaceted healthcare market.

#### Keywords

history of medicine, healing art, Ancient Medicine, Asclepius, Cult of Asclepius, Medicine of Asclepius

A votive relief from the first half of the 4th century BCE shows a group of mortals, with their hands raised in a reverent pose, approaching gods standing in a row opposite to them (fig. 1). Asclepius leads the group of gods on the right-hand side. He is depicted in a familiar manner with beard, cloak and rod. He is followed by Hygeia, seen from the back, and his sons, Machaon and Podalirius, who represent surgery and internal medicine. Visible to one side are also his daughters: Iaso, Akeso and Panacea. The daughters have been introduced into the family group towards the end of the 5th century BCE (Benedum 1990: 225). Hygeia was later integrated into the family (Stafford 1998: 163–170, De Luca 1991, Sobel 1990); however, in contrast to Epione, the wife of Asclepius, she became closely attached to the field of healing (Paus. 2.4.5, 27.6).<sup>1</sup> The cult merely acknowledges Hygeia as the daughter of Asclepius, but she was in fact almost as equally worshipped as her father (Paus. 8.28.1, 47.1). This reverence is also shown in a Roman gem from the 1st century CE that is preserved in the Kunsthistorisches Museum in Vienna (Inv.-No. IXb 1550). Besides this tradition, in which Asclepius was honored as a deity, he was also recognized as a mortal being.

# Asclepius – human and deity

In Homer's testimony, Asclepius was a ruler of Trikka and also worked there as a doctor. His two sons, Podalirius and Machaon, were also doctors (Hom. II. 2.732, Steger 2000: 32, Cordes 1991). Based on this heroic tradition, a cult of Asclepius and his relatives as heroes developed, starting in Trikka (Herod. 2.97, Hom. II. 2.729-733, 4.222, Renberg 2017: 203–5). Thus, in the 6th century BCE, Asclepius was still perceived as a healing hero, not yet a god. Therefore, a clear relationship between Asclepius and the ideas of the Hippocratic writings, and thus a rational medicine, can be presented. This becomes evident in the mosaic

<sup>&</sup>lt;sup>1</sup> The abbreviations of the Ancient authors and their works follow the recommendations of the Oxford Classical Dictionary (Hornblower et al. 2012).



**Fig 1.** Votive relief: Asclepius and his family with devotees. Athens, National Archaeological Museum No. 1402, from Luku, marble, height 51 cm, depicted in Steger 2018: 42 fig. 4. Photo: akg-images / De Agostini Picture Lib.

from Cos where Asclepius and a person identified as a Hippocratic physician are shown together (fig. 2).

Another proof of this substantive affinity is the fact that Hippocrates is sometimes also called Asclepiade (Plat. Prot. 311b). Accordingly, no reports of miraculous healings from this early period have survived in the Asclepius sanctuaries.

In general, it should be noted that for the presentation of the history of sanctuaries of Asclepius in relation to culture and medicine, epigraphic sources, literary texts, papyri, numismatic and archaeological evidence need to be considered.



**Fig 2.** The arrival of Asclepius on Cos. Mosaic from the House of Asclepius, Cos, Archaeological Museum of Cos, height 1.13 m, width 1.11 m, 2nd or 3rd century CE, depicted in Petsalis-Diomidis 2010: fig. I. From the personal archive of F. Steger.

The cult of Asclepius was established at the beginning of the 5th century BCE in Epidaurus. At first, the cult of Apollo Maleatas took place there (Tomlinson 1983: 22 with footnotes 13 and 92-94). Asclepius was then worshipped there as a god, he was regarded as the son of Apollo, who in turn was worshipped as a sender and healer of diseases. Because, according to the concept of theurgy, gods sent diseases. However, the healing of illnesses was a task that fell to any deity or hero, who was able to heal through their superhuman powers. As a locus classicus, it should be reminded that Apollo sent the Greeks "loimos" - the plague (Hom. Il. 1.42-53).

τίσειαν Δαναοὶ ἐμὰ δάκρυα σοῖσι βέλεσσιν. ˁΩς ἔφατ' εὐχόμενος, τοῦ δ' ἔκλυε Φοῖβος Ἀπόλλων,

βῆ δὲ κατ' Οὐλύμποιο καρήνων χωόμενος κῆρ, τόξ' ὥμοισιν ἔχων ἀμφηρεφέα τε φαρέτρην' ἔκλαγξαν δ' ἄρ' ὀϊστοὶ ἐπ' ὥμων χωομένοιο, αὐτοῦ κινηθέντος' δ δ' ἤιε νυκτὶ ἐοικώς. ἕζετ' ἔπειτ' ἀπάνευθε νεῶν, μετὰ δ' ἰὸν ἕηκε' δεινὴ δὲ κλαγγὴ γένετ' ἀργυρέοιο βιοῖο' οὐρῆας μὲν πρῶτον ἐπώχετο καὶ κύνας ἀργούς, αὐτὰρ ἕπειτ' αὐτοῖσι βέλος ἐχεπευκὲς ἐφιεἰς βάλλ': αἰεὶ δὲ πυραὶ νεκύων καίοντο θαμειαί. Ἐννῆμαρ μὲν ἀνὰ στρατὸν ῷχετο κῆλα θεοῖο.<sup>2</sup>

With his arrows, Apollo sent divine retribution for a human offense. The offence, in this case, was that Agamemnon was denied Chryseis. This is how Apollo became a god of plague. But Apollo also healed the Greeks again, after they had placated him with ritual acts, and washed themselves clean from crimes (Hom. II. 1.314-5). The ritual actions for gods' forgiveness are manifold. Apollo is soothed by a great sacrificial feast with food, drink, dance and song by a paean (Hom. II. 1.467-74).

<sup>&</sup>quot;Let the Danaans pay for my tears by your arrows" So he spoke in prayer, and Phoebus Apollo heard him. Down from the peaks of Olympus he strode, angered at heart, bearing on his shoulders his bow and covered quiver. The arrows rattled on the shoulders of the angry god as he moved, and his coming was like the night. Then he sat down apart from the ships and let fly an arrow: terrible was the twang of the silver bow. The mules he assailed first and the swift dogs, but then on the men themselves he let fly his stinging shafts, and struck; and constantly the pyres of the dead burned thick. For nine days the missiles of the god ranged among the host (See: Homer 2003).

The complex work on the myth of Asclepius begins with Hesiod (Hes. Frg. 50, Paus. 2.26.7) and is summarized in the late Hellenistic synthesis of Diodorus (Diod. 4.71.1-3).

Diodorus's deliberations were based on the account of the mythographers (Steger 2000: 31-38): in these, Asclepius was the son of Apollo and Coronis. He was born with special faculties, distinguished himself through ingenuity, and he was keen to study medicine because he wished to be able to help people. He discovered many remedies, which were beneficial to human health. Among his outstanding gifts was the ability to cure even patients whose condition was considered hopeless. Because of the astonishing results he achieved, he acquired the reputation of having the power to bring the dead back to life. Yet, the response to Asclepius' skills was not wholly positive. Hades complained to Zeus that the number of dead had gone down considerably as a result of Asclepius' interference. Zeus found Asclepius guilty and, in his wrath, slayed him with a thunderbolt. Asclepius had broken the law by extending the life of his patients beyond the biological norm. Diodorus concludes his synthesis with a depiction of how Apollo had the Cyclops killed out of revenge because they had fashioned the thunderbolts for Zeus. Zeus, in return, punished Apollo by forcing him to serve a human.

The divine-looking representation of the Asclepius Giustini dates to the 4th century BC which shows the typical iconographic representation of this period (Steger 2018: 41 fig. 3, Meyer 1988). It is a bearded Asclepius, leaning on the snake-entwined rod. In this pose, Asclepius appears restful and emanates closeness and devotion to his devotees. The rod and the snake, typically winding around the rod, are central elements of Asclepius' attributes (Schouten 1967). If one keeps one's eyes open, then one will find these two elements in numerous places even today. It is noteworthy that this snake went into the history of art, from Greek antiquity through the Renaissance, and more generally became a symbol of medicine and pharmacy.

From the center in Epidaurus, numerous branches of the cult extended around the ancient world. This cult will ultimately stay in opposition to the Christian god (van Staden 1998, Haehling von Lanzenauer 1996). The great importance of Asclepius can once again be realized by the fact that more than a third of all stone tablets from the Aegean region depicting body parts were found in Asclepius' sanctuaries (Forsèn 1996: 145). This is how the cult was transferred to Athens (Clinton 1994): A ship from Epidaurus arrived with the cult statue of Asclepius into the port of Zea in Piraeus. Envoys brought the cult statue into the city's Eleusinion, the later Asclepieion. In 420/419 BCE, the Greater Mysteries were celebrated there. The "rotten" peace of Nicias had just been made, which soon will have proved itself as void. During this period, a deity-healing perspective was at just the right time and got a permanent place, as an addition to the established rational medicine, formulated in the *Corpus Hippocraticum*. At the time, the citizens of Athens still had vivid memories of the plague, which devastated Athens from 430 to 428 BCE, and again from 427/426 to 426/425 BCE (Wickkiser 2010). Asclepius can thus be understood as a preventive measure to ward off future health threats. For this reason, an Asclepius sanctuary was built in Athens and was further expanded in the 4th century BCE. In this sanctuary an altar, temple and pillared hall (Abaton) for the devotees to lay down can be found, as well as sources for washing. The Asclepieion in Athens had great economic significance.

How exactly the process of healing occurred in the sanctuaries of Asclepius, is a question that receives significant discussion in the research on the topic. Ultimately, there is much more speculation than well-documented theses. At this point, the complex tension between miraculous healings and actual treatment instruction need to be described (Steger 2018: 37–132). An early testimony to miraculous healings is attested to in the work "Plutus" of Aristophanes, which dates back to 388 BCE when it was performed in Athens as a comedy. It provides testimony to a tradition, in which Asclepius is considered as a deity. A few words regarding the content of the comedy: Plutus, the personified wealth, is blind, and accordingly, distributes blindly his wealth to the needy, but also to thieves. For this reason, he needs to be able to see again, so he can see who he is giving his money to. This task comes to Asclepius, as the slave Carion reports (Ar. Plut. 654-722). Asclepius gropes the head of Plutus and wipes his eyelids off with a clean cloth. Finally, two snakes lick Plutus' eyelids. Plutus gets up and can see again. Certainly, some of this description owes its character to the genre of comedy. Nevertheless, there remains something from the description of the actual healing process: devotees make sacrifices, they lay down in the temple for healing sleep, and there, they undergo an incubation. The god appears to them in the dream, treats them with medicines, but also with the help of the snakes. Such healing, as described in the comedy thus gets the character of a miraculous cure.

Asclepius was a very common deity. Riethmüller (2005) defines 159 Asclepius cult sites for the Greek mainland, 192 cult sites for the Greek colonial area and about 400 cult sites for the non-Greek area during the Roman Empire. Hart (2000) has compiled a semi-quantitative overview of the spread of the Asclepius cult. Asclepius thus emerged through magnificent shrines throughout the Mediterranean region, with offshoots into the Gallic-Germanic area. In these Asclepieia, where Asclepius was worshipped, patients and/or devotees, who sought Asclepius' help for their illnesses, were cared for. In short, the healing god Asclepius, with his healing cult reaching beyond the most



**Fig 3.** View from the upper terrace down to the middle and first terrace of the Asclepieion of Cos. From the personal archive of F. Steger.

important religious aspects, provided his own form of medicine, which was practiced in his sanctuaries (Steger 2004). In this context, a differentiated relationship between cult and medicine over the centuries needs to be described.

In the years 366/365 BCE at Cos, at the place where previously Apollo Kyparission had been worshipped, a sanctuary of Asclepius was erected (Interdonato 2013). In the same century, an Asclepieion also emerged in Pergamum (Paus. 2.26.8, Müller 2011, Riethmüller 2012, Radt and Pirson 2016). In these years, Cos itself had arose after several places were integrated through Synoikismos into the newly founded Polis. The sanctuary in Cos was discovered by the German archaeologist Rudolf Herzog in 1902 (Herzog 1907: 201). Even in Roman times, this Asclepieion was further developed, and it was magnificently shaped by large terrace walls, outside staircase, fountains and bathing facilities.

#### Asclepieion - the place

According to Vitruvius (1.2.7), healing temples had to be located in a healthy environment, close to healthgiving water springs from which the invalid devotees could benefit: "Naturalis autem decor sic erit, si primum omnibus templis saluberrimae regiones aquarumque fontes in his locis idonei eligentur, in quibus fana constituantur, deinde maxime Aesculapio, Saluti, et eorum deorum quorum plurimi medicinis aegri curari videntur. Cum enim ex pestilenti in salubrem locum corpora aegra translata fuerint et e fontibus salubribus aquarum usus subministrabuntur, celerius convalescent".<sup>3</sup>

Plutarch (Quaest. Rom. 94.286d) wrote that the Asclepieia of Greece and Asia Minor occupied elevated positions because of their climatological benefits. This also applies to the Asclepieion in Cos. Surrounded by cypresses and pine trees, this three-level terraced structure was built high up, on an elevated position (fig. 3). The structure itself also rises up high, with three terraces leading up to the temple of Asclepius, which is situated on the upper terrace. When the devotees arrived in this place of healing, they usually looked back on a strenuous journey and were in need of accommodation for the duration of their treatment, which might take

several months. The sites therefore provided purpose-built houses where the devotees stopped off. These specially equipped houses were comparable to guesthouses. Pausanias (2.27.6, 10.32.12) writes about hostels in Epidaurus where patients and priests resided for the duration of their stay. In Cos the lower terrace was reserved for guesthouses for patients. Proper houses can be clearly seen below the first terrace (fig. 4). These complexes had nothing to do with the actual treatment; they were intended for accommodation during the treatment. There is a strict spatial separation between accommodation on the one hand, and treatment (in the holy district) on the other hand.

In this respect, the thesis that the sanctuaries of Asclepius represented the first hospitals (Birchler-Argyros 1998: 5) cannot be substantiated. This can also be confirmed by an analysis of other Asclepieia. Treatment occurred in the holy district. Here, patients received treatment for a fixed period of time, as in a clinic, on an outpatient basis, until they were ready to return to the guesthouses. At Cos, another Doric temple graced the upper terrace. It was situated on the central axis of the complex and is reminiscent of the temple at Epidaurus.

There will be a natural decor: first, if for a temple there shall be chosen the most healthy sites with suitable springs in those places in which shrines are to be set up; secondly and especially for Aesculapius and Salus; and generally for those Gods by whose medical power sick persons are manifestly healed. For when sick persons are moved from a pestilent and healthy place and the water supply is from wholesome fountains, they will more quickly recover. (See: Vitruvius 1998)



**Fig 4.** Archaeological remains of houses in the entry area of the Asclepieion of Cos. From the personal archive of F. Steger.

Today, the remains of a Christian altar can be seen here. This testifies to the further development of this sanctuary. This upper temple was subordinated in its cultic function to the Asclepius temple with the altar, located on the middle terrace.

In the middle of the 3rd century BCE, the poet Herodas, who himself lived in Cos, portrayed in one of his Mimiambs titled "Consecrating and Sacrificing Women" (Herodas IV, Edelstein 1998: T482), how two simple women made sacrifices to Asclepius in the morning hours. The cock mentioned by Herodas, will again be spoken of in Plato's Phaedo (118a), when Socrates, in his hour of death, says to the present friends that Asclepius is still owed a cock.

In the 3rd century BCE, Epidaurus was the center of Asclepian medicine. At this place, a regular health resort emerged. This development is substantiated in the 3rd century BCE by the erection of a theater, which provided a supportive ambience in Epidaurus. Pausanias (2.7.1-2) describes the cult statue of Asclepius, made entirely of ivory and gold. This description fits with the iconographic type of coins dating to the 4th century BCE (Franke 1969: 62–3 fig. 2, Gardner and Poole 1963: plate 29 no. 14).

#### **Miraculous healings**

In the 3rd century BCE, the use of the written records, in the form of inscriptions, increases. Within the sacred area there were many stelae, which listed the names of devotees, or, to some extent, the places of their origin and their afflictions. Herzog (1931) edited 66 of such reports of miraculous healings, also called Iamata (LiDonnici 1995). In order to get an idea of the quality of the statements given there, two representative examples can be cited (Herzog 1931: A3, A12). However, at this point, I would like to advice a cautionary use of retrospective diagnosis, i.e. to identify an ancient illness with modern knowledge, methods and disease classifications.

Euhippos bore a spearhead in his jaw for six years. While he was sleeping here, the god drew the spearhead from him and gave it to him in his hands. When the day came, he walked out well, having the spearhead in his hands. (Herzog 1931: A12)

A man who was paralyzed in all his fingers except one came as a supplicant to the god. When he was looking at the plaques in the sanctuary, he didn't believe in the cures and was somewhat dis-

paraging of the inscriptions. Sleeping here, he saw a vision. It seemed he was playing the knucklebones below the temple, and as he was about to throw them, the god appeared, sprang on his hand and stretched out the fingers. When the god moved off, the man seemed to bend his hand and stretch out his fingers one by one. When he had straightened them all, the god asked him if he would still not believe the inscriptions on the plaques around the sanctuary and he answered no. "Therefore, since you doubted them before, though they were not unbelievable, from now on," he said, "your name shall be 'Unbeliever'." When the day came he left well. (Herzog 1931: A3)

These sources testify to a strong suggestive power exercized on those seeking healing. These Iamata teach that the devotees had sometimes undertaken long voyages to get to the sanctuaries. Concerning the inscriptions, we have information about travelers from Athens, Lampsacus, Laconia, Thasus, Chios, Epirus, Thebes, Heraclea, Messene, and Troezen. Correspondingly, longer periods of residence of the devotees are documented.

In the sanctuaries of Asclepius, incubations, including dream healings, took place (Wacht 1999, Harrisson 2014, Renberg 2017). During these incubations, ritual healing acts occurred alongside the therapeutic use of water, that is to say, regular water treatments (Bruit Zaidman and Schmitt Pantel 1994: 127–130, Steger 2005b). It is largely unclear what was the relationship of priests to healing treatments, and what possible role doctors took. Likewise, there is plenty of speculation about dreams and dream healings, also in the psychoanalytic literature (Meier 1967, Walde 2001).

After a ritual of prayer, ablution, and sacrifice, the patients slept in the temple so that they could contact

the god (Graf 1992). The place where they lay down to sleep is also the place in which incubation took place: during the incubation, the encounter with Asclepius evolved in a three-stage process, which can be described as "rite de passage" (van Gennep 1909).

In the first phase, called the separation phase, the devotee became detached from his everyday life and alienated from his social environment. This phase included the ritual preliminaries, the entering into the incubation room with the appropriate ritual attributes (white robe, olive crown) and lying down on the pallet to sleep. The second phase was the threshold- or transformation phase. During this phase, the patient was put into a state of disorientation, also referred to as the "liminality phase", where he had alien, new, and sometimes disconcerting experiences. In this second phase, one experienced the moment when the lived and the imagined world coincided, a state when symbolic forms merged and caused the curious changes in the way reality was perceived. This was the heart of the incubation process, the encounter with the god, when - at least in the dream - the incubant had direct contact with the god who helped him (Ar. Plut. 696-763). In the third and final phase, the phase of reintegration and incorporation, the patient, who was now transformed after meeting the deity, was reaccepted into society with his new status. The devotees thus learned in the dream, how they had to behave with regard to their articulated suffering. They put into practice the specific therapy proposals from their dream, if they had received such, on the site, similar to a health spa treatment. The the incubation the form contact with Asclepius took place during of a transitional rite: separation, liminality, and reintegration (Steger 2018: 88).

Out of gratitude, the devotees finally made offerings to Asclepius in the form of inscriptions in which they mostly reported about the events that occurred during their stay in the sanctuary (Herzog 1931, LiDonnici 1995, Renberg 2017). From these inscriptions, we derive our knowledge about the processes that took place and about which there has been a great deal of speculation. Asclepius appeared in the dream and either induced a cure by himself or he mentioned methods and means with the help of which healing could be facilitated (Weinreich 1909: V–VIII). Hence, whilst sleeping, dreams were experienced that promised healing. However, the preserved sources do not allow us a closer reconstruction of how these dreams were actually used.

An interesting fact is that the topic of dreaming also occurs in the Hippocratic writings (Hippoc. Morb. sacr. 15, VI 390 L). For example, a terrifying dream image is supposed to be related to the fact that the brain is being brought to life, because a large amount of blood penetrates the brain. Elsewhere it is testified (Hippocr. Insomn. 2, IV 642 L) that the psyche indicates the pathological states of the body through dreams. Also, during the 3rd century BCE, miraculous healings (Iamatica) were described by the epigrammatist Poseidippus (Seidensticker et al. 2015). Poseidippus spent much of his life at the court in Alexandria where euergetic foundations (i.e. charitable donations) took care of cults, shrines and the arts. Poseidipp was, next to Callimachos, an important Ptolemaic court poet. He wrote these Iamatica in a poetic form; therefore, in these works, suffering is formally represented in long passages, whereas the healing is depicted in a short form. To point out: his content is exaggerated poetically. In this papyrus, published in 2001, there are seven epigrams and a 32-verse Iamaticon (Männlein-Robert 2015, nos. 95–100). They provide a collection of healing stories from an unknown sanctuary of Asclepius.

Again, these healing stories provide names, partly origins of the individuals mentioned, and their illnesses. The context of the plot is the sacred area, the Temenos of an Asclepieion. An exception is epigram no. 95 - in this epigram, the place is the Delphic sanctuary of Apollo. An important question remains, whether these are historical documents or poetic creations. There is some evidence that Poseidipp plays with the conventions of an established epigraphic genre and establishes a literary genre. Thus, a purely Hellenic sacred sphere is deliberately staged here, because it is based on Hellenic divine instances such as Apollo and Asclepius. These epigrams testify to the spontaneous healing of hopeless cases through medical arts, that are performed at the last moment (no. 95), that take place during a sacrifice for Asclepius (no. 96), that occur after sleep in the temple (nos. 97, 98, 100) or that happen after praying to Asclepius (no. 99). These epigrams describe a possible course of action in an Asclepieion. At the same time, a Panhellenic spread of the cult is attested to in Delphi (no. 95), Cos (no. 97), and Lebena on Crete (no. 99). Snakebite, paralysis, epilepsy, infection, deafness and blindness are the typical medical conditions described. The Epidaurian Iamata (IG IV<sup>2</sup> I 121–124, Herzog 1931, LiDonnici 1995) served as a template for them, visible is the strong reference to the miraculous cures (121 and 122). Poseidipp's Iamatica provides an example of an editorially arranged group of epigrams, in which the topics are miraculous and rapid healings. These epigrams are short. The shortest one is epigram no. 96, written in two distiches and without passages praising a god.

πρὸς σὲ μὲν Ἀντιχάρης, Ἀσκληπιέ, σὺν δυςὶ βάκτροις ἦλθε δι' ἀτραπιτῶν ἴχνος ἐφεκλόμενος σοὶ δ[ὲ θυη]πολέων εἰς ἀμφοτέρο[υ]ς πόδας ἔστη καὶ τὸ π[ο]λυχρόνιον δέμνιον ἐξέφυγε.<sup>4</sup>

To you, Asclepius, came Antichares, on two crutches as he traced a trail on the way; he sacrificed to you and stood on his feet, and he escaped the bed he was tied to for a long time.

<sup>(</sup>Transl. by F. Steger)

Epigram no. 96 refers to the sudden healing of Antichares' bad foot during a sacrifice for Asclepius. The text is well preserved apart from a few exceptions. The content expresses the great gratitude of the healed man. Whether it is a miracle cure, as claimed in the literature, remains questionable; in this reference, there is not much to read in the inscription.

The Iamatica imitate genuine inscriptions, but in fact, they are literary epigrams that are short and focused on the transition from sickness to health and include the names of the persons speaking. In this respect, the absence of the Doric dialect, which can be witnessed in the Iamata, can be explained. Poseidipp's Iamatica are a new genre that includes a purposeful collection of selected texts composed as a ring that can be read both seriously and ironically. Here we can assume that the reader of the epigrams is a person who reads epigrams with a sacral context on papyrus scrolls, and behaves in a significantly different way – spatially and temporally – than a reader in an Asclepieion.

οἶος ὁ χάλχεος οὖτος ἐπ' ὀστέα λεπτὸν ἀνέλχων πνεύμα μόγι[ς] ζωὴν ὅμματι συλλέγεται, ἐκ νούσων ἐσάου τοίους ὁ τὰ δεινὰ Λιβύσσης δήγματα φαρμάσσειν ἀσπίδος εὑρόμενος Μήδειος Λάμπονος Ὁλύνθιος, ὧι πανάχειαν τὴν Ἀσχαληπιαδῶν πᾶσαν ἔδοχε πατήρ· σοὶ δ', ὦ Πύθι' Ἄπολλον, ἑῆς γνωρίσματα τέχνης λείψανον ἀνθτρόπου τόνδ' ἔθετο σχελετόν.<sup>5</sup>

Poseidipp's proximity to the Ptolemaic royal court is also attested by the epigram no. 95, a consecration epigram of the physician Medeios. Here, Medeios consecrates a bronze statue to Apollo, which has to be erected in Apollo's sanctuary in Delphi. In this case, a seriously ill person suffering cachexia is portrayed, who is emaciated after a snakebite down to skeletal appearance, and who is to be rescued by Medeios. The text is well preserved, except for a few letters, contains some spelling mistakes and is written in the Attic-Ionian dialect. The literature on the topic refers to this text as an example of miraculous healing (Männlein-Robert 2015). Such a point of view is difficult to understand, since the cure is performed by a doctor who uses a remedy for poisoning after a snakebite. Rather, the medical procedure provides an argument for an independent medicine of As-

<sup>5</sup> As this bronze statue is emaciated to the bones, hardly breathes, and collects life in his view, from these diseases the same person rescued patients, who against terrible bites of the Libyan adder a remedy he found Medeios, son of Lampon, from Olynth, to whom the universal

remedies of the Asclepiads handed over the father; for you, Apollo from Pytho, as proof for his art as the last thing he erected this skeleton, what remains of man.

(Transl. by F. Steger)

clepius. The fact that Medeios brings a nearly doomed person back to life, is certainly reminiscent of the wellknown Asclepius motif. It should also be noted that it is not a dedication to Asclepius, but Apollo, although the relationship between these two is close. Also this fact is only very sparsely discussed in the literature on the topic.

δλβον άριστος ἀν[ηρ], Ἀσκληπιέ, μέτριον αἰτεῖ – σοὶ δ' ὀρέγειν πολλὴ βουλομένωι δύναμις – αἰτεῖται δ' ὑγιείαν, ἄκη δύο· ταῦτα γὰρ εἶναι ἠθέων ὑψηλὴ φαίνεται ἀκρόπολις.<sup>6</sup>

Epigram no. 101 is a supplication to Asclepius, in which prosperity and health are invoked or requested as the two most important means of healing or salvation. The text was amended in two places (lines 1 and 3). In addition to healing remedies, and healing sleep, wealth or rather health, are the leading theme of treatment. This theme fits in with the period of origin during Hellenism, which was marked by that plurality – religious healing in the sense of healing miracles on the one hand, and rational healing on the other hand. This tension is also made clear by the framing epigrams, that is, the commitment to the gods on the one side and the human merit of the "techne" on the other side. In this respect, the physician Medeios could also be addressed in the epigram no. 101. In this context, the reading moves between irony, skepticism, and humour.

These epigrams were created by a poeta doctus. Poseidipp may have presented a commissioned work here, a literary story accompanied by ironic moments. In the foreground, the text may be concerned with medical and religious remedies; de facto, these are literarypoetic remedies against popular and religious beliefs in wonders.

# Asclepius' transfer to Rome and the Roman Empire

Beyond Greece, the cult and medicine of Asclepius existed in Rome and later in the Roman Empire. The Roman historian Livy (10.47.6–7) chronicles this cult transfer: "...Multis rebus laetus annus uix ad solacium unius mali, pestilentiae urentis simul urbem atque agros, suffecit; portentoque iam similis clades erat, et libri aditi quinam finis aut quod remedium eius mali ab dis daretur. inuentum in libris Aesculapium ab Epidauro Romam arcessendum; neque eo anno, quia bel-

<sup>6</sup> Moderate wealth, Asclepius, the best man demands – for you, it is easily possible to grant it –, for himself he demands health: two remedies; they seem to be a proud acropolis for the morals. lo occupati consules erant, quicquam de ea re actum praeterquam quod unum diem Aesculapio supplicatio habita est".<sup>7</sup>

During the Third Samnite War, as Rome fought against the tribe of the Samnites in Samnium south of the Apennines, a plague broke out in Rome in 293 BCE. Latium was afflicted by this highly contagious disease (Graf 1992: 160-167, Krug 1993: 163-165, Haehling von Lanzenauer 1996: 18-24); many saw this plague as a divine punishment for human offenses. The Sibylline books advised - after being asked – to bring Asclepius from Epidaurus to Rome. Accordingly, senators were sent to Epidaurus to seek help from Asclepius. This transfer of the cult is described in the Metamorphoses of Ovid (15.626-744, Flashar 2016: 222). The oracle in Delphi advises to fetch Asclepius from Epidaurus in order to fight the plague. The god undertook the journey to Rome in the guise of a serpent (Ov. met. 661). The snake left the ship when it was near the Tiber Island. This cult transfer was depicted on a medallion from the time of Antoninus Pius (Steger 2018: 18 fig. 2).

At this point, in the 3rd century BCE, an Asclepieion was erected in Rome. A copper engraving of the 18th century by Piranesi preserves this memory (fig. 5). The sanctuaries of Asclepius were favoured by the emperors and flourished again in the time of the Roman Empire. For example, Epidaurus was plundered in the 1st century BCE by the soldiers of Sulla, but in the 2nd century CE, it was once again vigorously promoted and equipped. The same applies to the sanctuary in Pergamum.

In these sanctuaries, the emperors were also worshipped as part of the imperial cult besides Asclepius, who was worshipped there as a part of the healing cult; however, this worship went far beyond the religious aspects.

During the period of the Roman Empire, the medicine of Asclepius showed a productive integration of cult and medicine, which secured its own place in the health and healing market. Asclepius can thus claim to have given his name to an independent and separate form of medicine, Asclepian medicine, which is characterized by an interlocking of curative-ritual actions and rational medicine (Steger 2004, 2018). The everyday-praxis in the sanctuaries of Asclepius was shaped by the diversity of the offer provided for patients. In general, we assume the dominance of a multi-faceted healthcare system during this period, in which doctors, midwives, dealers of pharmaceuticals, sorcerers, and miracle healers existed alongside healing cults.

#### Accounts of patients in the Asclepieia

Knowledge about health resorts can be taken from the accounts of patients, which often included selfreflective statements (Steger 2007, Israelowich 2015, Petridou and Thumiger 2016). One was Publius Aelius Aristides, who was a patient of Asclepius in Pergamum for years (Petsalis-Diomidis 2010, Steger 2016). He has left a detailed medical diary (hieroi logoi) about his relationship to Asclepius, which is suitable for such an analysis of the Asclepieia. Aristides began to write these accounts during the winter of 170/171 CE on his estate in Laneion, after his stay in the sanctuary of Asclepius between 143 and 147 CE In doing this, he relied on his diary-like notes from Pergamum. From the beginning of his stay, the god has given him instructions to write down his dreams (Aristid. hier. log. 2.2). He now resorted to this transcript, which he had made himself or dictated. The hieroi logoi are probably one of the most comprehensive ancient self-reflections of a person's inner life, in which Aristides partly captured his individual bodily experiences on a daily basis.

Aristides reflects powerfully on himself and his body and describes what he feels and experiences. He was ill and left detailed material about this condition (Aristid. hier. log. 2.5-6). One learns a lot about Aristides' situation during these years, how he experienced his own physical ailments but also about therapeutic attempts and the effect of these on his person and his ordeal. He became a patient of Asclepius in Pergamum and, in his account, he gives an impression of how his cure was shaped and how he felt about his treatment. But he also gives information about his relationship to the medical care of the period, by repeatedly exposing the treating physicians as incapable, and only describing Asclepius as the God who saved him (Aristid. hier. log. 2.7-8).

We can conclude that Aristides' own testimonials provide an ideal "inside view" of his bodyexperience as well as a view "from below" (Porter 1985) into the healthcare provided at Pergamum – certainly at first glance. However, if we study his descriptions more closely, we notice that they are often exaggerated, distorted, and even fictitious (Aristid. hier. log. 2.37, 62). In this respect, an interpretation of the Aristides' testimony requires strong criticism of the source, and the inclusion of other written sources as evidence.

The year had been one of many blessing, which yet were hardly a consolation for one misfortune – a pestilence which ravaged both city and countryside. Its devastation was now grown portentous, and the Books were consulted to discover what end or what remedy the Gods proposed for this misfortune. It was discovered in the Books that Aesculapius must be summoned to Rome from Epidaurus; but nothing could be done about it that year, because the consuls were occupied with the war, except that for one day a supplication to Aesculapius was held. (See: Livy 1926)



**Fig 5.** Copper engraving of the Tiber Island. Giovanni Battista Piranesi: Vedute di Roma, circa 1780. Photo: under Creative Commons License by Wellcome Collection and depicted in Steger 2018: 73 fig. 10.

If this is done properly, Aristides is also a source for insights into the religious environment of Asclepius in his well-known prose hymns (for example Aristid. Or. 38, 39, 42, 53, Russell et al. 2016). Hymn 39 is almost a declaration of love to the well in the Asclepieion (Aristid. Or. 39.1). This praise is quite transfigured, and no significant knowledge about medical practice can be gained from the hymn. Perhaps, however, one should emphasize the importance of water (Aristid. Or. 39.12), which is indeed in a ritual sense as well as in a healing sense central to the cult and medicine of Asclepius (Aristid. Or. 39.15):

πολλοὶ μὲν γὰρ τούτῷ λουσάμενοι ὀφθαλμοὺς ἐκομίσαντο, πολλοὶ δὲ πιόντες στέρνον ἰάθησαν καὶ τὸ ἀναγκαῖον πνεῦμα ἀπέλαβον, τῶν δὲ πόδας ἐξώρθωσε, τῶν δὲ ἄλλο τι. ῆδη δέ τις πιὼν ἐξ ἀφώνου φωνὴν ἀφῆκεν, ὥσπερ οἱ τῶν ἀπορρήτων ὑδάτων πιόντες μαντικοὶ γιγνόμενοι. τοῖς δὲ καὶ αὐτὸ τὸ ἀρύτεσθαι ἀντ' ἄλλης σωτηρίας καθέστηκε. καὶ τοῖς τε δὴ νοσοῦσιν οὕτως ἀλεξιφάρμακον καὶ σωτήριόν ἐστι καὶ τοῖς ὑγιαίνουσιν ἐνδιαιτωμένοις παντὸς ἅλλου χρῆσιν ὕδατος οὐκ ἄμεμπτον ποιεῖ.<sup>§</sup>

However, the value of the hymns in terms of being a source for medical practice is similar to Lucian's writing "Alexandros or the false prophet" — high for the history of religion, but low for the medico-historical internal perspective on the medicine of Asclepius (Steger 2005a). This perspective is also known from foundations (in-

scriptions, offerings) of grateful devotees. Source-critically, it is important to differentiate in this area between miraculous healings and medical reports. Accounts of miraculous healings were still present in the 2nd century CE, as it is testified by an inscription from Rome (IG XIV 966, Rüttimann 1986: 58-59). Here are the accounts of four miracles that concern four men, who could not find help anywhere else: 1. A blind man called Gaius was instructed by Asclepius to approach the altar in a reverent attitude, bow to the god, then walk around the altar from right to left, place his five fingers on the altar, remove his hand again and place it on his own eyes. Suddenly he could see again. 2. Lucius, who had suffered from a pain in his side, was told by Asclepius to approach the altar, gather the ashes there, mix them with wine and paste the mixture on his side. He also was immediately released from his affliction. 3. Julian kept bringing up blood. Asclepius ordered him to collect pine nuts at the altar and eat them three days in a row with honey. He was also cured. 4. Finally, Asclepius ordered Valerius Aper, a blind soldier, to take the blood of a white cock, mix it with honey and apply the salve to his eyes. He was also cured. Such spectacular reports of miracles are also known from the Christian tradition (Weinreich 1909), such as Mark's account (Mk 8.23-32) of the healing of a blind man or John's account (Joh 5.5-9) of the healing of a paralyzed patient. They are also known from the Augustine tradition (Aug. civ. 22.8, Günther 2000: 263). In all these cases, god provides a cure.

Also, however, the alleviation of suffering through therapeutic spa treatment can also be observed. These therapeutic instructions correspond to contemporary medical theory. These methods are less spectacular than it has sometimes been thought of, but rather, these spectacularly highlighted procedures can be classified into the field of reports of miracles. These documents also allow a "bottom-up" perspective on the tending and running of the Asclepieia and provide, in a certain way, a patient's perspective. In these accounts, the patients report from their perspective about the treatment and providing information about their stay, therapy and success. Such accounts in the form of donations are indeed rare and scarce. Oftentimes these gifts of gratitude are limited to naming the founder, the deity, and in the best cases, the reason for the offering, for example, the medical cause.

An especially well-preserved inscription of Marcus Iulius Apellas from Epidaurus (IG IV<sup>2</sup> I 126, Hahn 1976, Steger 2018: 122–3) shows this in an exemplary manner.

Apellas was relieved of his suffering in the Asclepieion of Epidaurus and left Asclepius in gratitude a long inscription in which he gives information from the perspective of a patient about his stay. Apellas travelled to the Asclepieion in Epidaurus from Mylasa in Caria. Because of his poor health – Apellas was often sick and suffered from indigestion – the god summoned him to the sanctuary. During his stay there, Apellas followed

<sup>&</sup>lt;sup>8</sup> Many have regained their sight by bathing in it (the well in Pergamum – *FSt*); many, by drinking it, have been cured of chest disease and recovered the breath we need for life. It has straightened the feet, or other limbs, of others. A dumb man has spoken after drinking it, like those who become prophets by drinking secret waters. For some indeed, the mere act of drawing the water has been a means of salvation. For the sick, it is an antidote and a cure: for the healthy who live with it, it makes the use of any other water a mistake. (See: Russell et al. 2016: 43)

the instructions he received from Asclepius, hoping they would cure him. This turned out to be worthwhile, since he finally left the sanctuary in good health.

Already before the journey to the sanctuary, Asclepius advised the sick Apellas not to get upset during the voyage. He should stay calm in Aegina on the way. It may be the first indication of the patient's distressed emotional state. In addition to his illness - we find out that Apellas contracted other illnesses during his stay – he was also mentally frail. What Apellas does not communicate is whether the new afflictions he acquired were a result of the therapies prescribed by Asclepius. The therapies proposed to Apellas illustrate the duality of medical therapy and cultic aspirations that is so typical of Asclepian medicine (Edelstein and Edelstein 1998: 139, Hahn 1976: 49). The instruction to keep his head covered for two days is certainly not a part of a medical therapy but rather of the mysterious cult practiced at the sanctuary. The cultic element is also reflected in the fact that Apellas was called to the sanctuary by Asclepius (Weinreich 1909: 112, Meier 1967: 62). The patient from Caria leaves no doubt that his stay was initiated by Asclepius.

The cult aspects described in this account, run parallel to the medical-therapeutic instructions Apellas received from Asclepius, namely to wash without help and press against the wall at the akoai. The rubbing and massaging of body parts can have a relaxing as well as a soothing effect. At the same time these acts, as well as that of cleansing, are also important cultic rituals. Bodily cleanliness was expected of anyone entering the temple and water pools were therefore provided in the appropriate places in the sanctuaries. Apellas' description is paradigmatic of the concurrence of medical-therapeutic instructions and cultic-ritual provisions. Apellas mentions another cleansing ritual later, when he talks about being asked to pour wine over himself before entering the warm water; similarly, with the instruction to walk barefoot, because being barefoot was an intrinsic part of initiation and lustration rituals. Apellas is, moreover, advised to apply sand to his body and take a warm bath. Warm baths were often used to counter weakness and inertia, but particularly also for the kind of sluggish digestion Apellas was afflicted with. Sand, too, was used as an effective, warming, cleansing, and healing remedy (Ursin et al. 2018). Water, like sand, has an additional cultic significance (Steger 2005b). Apellas followed the instructions he received from Asclepius. His hope to be relieved from his ailments induced him to observe the medical-therapeutic as well as the cultic-ritual instructions given to him at the Asclepieion.

In addition, Apellas adhered to the following four therapeutic steps prescribed by Asclepius: the first was diet-related and consisted of fiber-rich food such as celery and lettuce, taken with plenty of fluids, mostly milk with honey. For two days, Apellas was given cheese, bread, celery and lettuce. Bread was a common staple and formed the basis of every meal. According to the views held at the time, cheese was considered more effective than milk for digestive disorders: if the stomach was affected, a matured cheese was used, grated and mixed with flour; if the problem was ileum-related, a mild cheese was considered preferable. In case of colic, a mixture of cheese and wine in a 1:3 ratio was recommended (Plin. HN 28.207, 20.140, Gal. De san. Tuenda 6.696 K). Lettuce is recommended for its cooling properties, in combination, for instance, with celery (Gal. De alim. facult. 6.638.4-8 K). It refreshes, stimulates the appetite and has a libido-reducing effect. Celery is said to promote diuresis (Gal. De alim. facult. 6.637 K). Milk, like bread, is a common staple. Mixing milk with honey is known to have a soothing effect on the soul and relieves constipation. Any undigested intestinal contents will be moved on by this mixture. Honey is digested faster than any other foods and is therefore said to promote digestion if it is mixed with milk and appropriately dosed (Gal. De alim. facult. 6.685 K).

In addition to following the dietary instructions, Apellas also takes the medicines prescribed by Asclepius, such as soaked lemon peel. Lemon, if a particular extract is prepared, promotes digestion (Gal. De alim. facult. 6.618 K). Together with honey, lemons promote the further processing of any bolus left behind in the gastrointestinal tract. With his offering of thanks, Apellas has left a therapy report that includes all the instructions he received. These therapeutic recommendations are, as the comparison has revealed, similar to contemporary medical views, expressed in the specialist literature. It can be assumed that the therapeutic recommendations mentioned in the inscription arose from the prevalent medical thinking of the time of origin.

Apellas is also told to gargle because of his swollen uvula. The instruction to use cold water is a reference to the general significance of cold-water treatment. Apellas reports further, how anointing himself with salt and mustard caused him pain. Salt has a cauterizing, burning and cleansing effect and was therefore often used in ointments prescribed against fatigue. Alongside mustard, it has also been used in chemical peelings (Ursin et al. 2018). Galen speaks of salt in connection with plasters (De comp. med. per gen. 13.504 K, 13.928 K and 13.942 K). Among all the medical traditions represented at the health and healing market of the time, it was the Methodist school of Ancient Greek medicine who assigned an irritating and inflammatory effect to mustard plasters (Hahn 1976: 38-9). Apellas soon got rid of this particular pain by washing himself with water. He also followed the advice to use dill and oil against his headache. The relief he soon experienced was mostly due to the cooling and therefore alleviating effect of these substances.

In addition to diets and medicines, Apellas is also advised to take up physical exercise: he needed a recreational sport and was told to run and take walks. The final and last recommendation Apellas receives is to use the trapeze. Using the trapeze is seen as a form of relaxation: Apellas who suffered from persistent constipation needed to let go of any tension, which is also why he was advised at the very beginning of his journey, to remain calm. Asclepius emphasized the need for Apellas to remain calm. His concept appears to have been successful, since Apellas, after being subjectively cured of his afflictions at Epidaurus, left this gift inscription as an expression of his gratitude and as a way of giving an account of his cure. His chronic constipation and any new disorders he contracted were treated with a therapy that consisted of dietary measures, medicines, light exercise and as much peace and rest as possible.

The therapy Apellas received was based on contemporary medical thinking and included components such as exercise and rest, which are familiar to us from modern health spas. This approach can be seen as specific to Asclepian medicine. The account left by Apellas is evidence of a therapeutic approach that was customary in the Asclepieia. The sanctuaries of Asclepius provided an important offer here. One can literally talk about places of leisure surrounded with libraries, theaters, and sport facilities.

#### Conclusion

Not least because of the strong promotion by the Roman emperors, Asclepius was able to resist for a long time the monotheistic Christian god, who later by himself became Christus Medicus. A Testimony from the 3rd century CE provides information about the erection of a branch of the Asclepius' sanctuary in Abonuteichos (Steger 2005a). A Testimony from the 6th century CE still informs us about the existence of this branch.

Thus, for more than a millennium, Asclepius provided an attractive offer for patients or devotees. This offer existed on the interface of healing cult and medicine, or healing art. Asclepian medicine was much in demand in the whole Mediterranean region and expanded through the foundation of further branches. In the Asclepieia, a complex synthesis of cult, medicine and art took place and led to creation of a specific and independent form of medical care (Asclepian medicine). Thus, already more than 2000 years ago, Asclepian medicine provided a comprehensive system of medical care, similar to medical treatment, which is highly in demand in our times.

## References

- Benedum C (1990) Asklepios Der homerische Arzt und der Gott von Epidauros. Rheinisches Museum 133: 210–226.
- Birchler-Argyros UB (1998) Quellen zur Spitalgeschichte im Oströmischen Reich. Herzogenrath: Verlag Murken-Altrogge.
- Bruit Zaidman L, Schmitt Pantel P (1994) Die Religion der Griechen. Kult und Mythos. C.H. Beck. München.
- Clinton K (1994) The Epidauria and the Arrival of Asclepius in Athen. Hägg R (Ed.) Ancient Greek Cult Practice from the Epigraphical Evidence. Svenska Institutet i Athen. Stockholm. P. 17–34.
- Cordes P (1991) Innere Medizin bei Homer. Rheinisches Museum 134: 112–120.
- De Luca G (1991) Zur Hygieia von Pergamon: Ein Beitrag. Mitteilungen des Deutschen Archäologischen Instituts. Abteilung Istanbul 41: 325–362.
- Edelstein EJL, Edelstein L (1998) Asclepius. Collection and interpretation of the testimonies. Johns Hopkins University Press. Baltimore, Md.
- Flashar H (2016) Hippokrates. Meister der Heilkunst Leben und Werk. C.H. Beck. München.
- Forsén B (1996) Griechische Gliederweihungen. Eine Untersuchung zu ihrer Typologie und ihrer religions- und sozialgeschichtlichen Bedeutung. Foundation of the Finnish Institute at Athens. Helsinki.
- Franke PR (1969) Asklepios Aesculapius auf antiken Münzen. Medizinischer Monatsspiegel 3: 60–67.
- Gardner P, Poole RS (Eds) (1963) Catalogue of Greek coins. Peloponnesus (excluding Corinth). Bologna: A. Forni.
- Graf F (1992) Heiligtum und Ritual. Das Beispiel der griechischrömischen Asklepieia. In Schachter A (ed.) Le sanctuaire grec. Fondation Hardt. Geneve. P. 157–199.
- Günther, L-M (2000) Reisende und Pilger in der nordafrikanischen Hagiographie. In Khanoussi M, Ruggeri P, Vismara C (Eds) L'Africa

Romana XIII. Atti del XIII convegno di studio, Djerba 1998. Carocci. Rom. P. 413–417.

- Haehling von Lanzenauer B (1996) Imperator soter. Der römische Kaiser als Heilsbringer vor dem Hintergrund des Ringens zwischen Asklepioskult und Christusglaube. Triltsch, Düsseldorf.
- Hahn PT (1976) Die Weihinschrift des Apellas. Kurbericht oder Wundererzählung? Ph.D. Thesis. Friedrich-Alexander-University. Erlangen-Nürnberg.
- Harrisson J (2014) The Development of the Practice of Incubation in the Ancient World. Michaelides D (Ed.): Medicine and healing in the ancient Mediterranean world. Oxford: Oxford University Press. P. 284–290.
- Hart GD (2000) Asclepius. The god of medicine. London: Royal Society of Medicine Press.
- Herzog R (1907) Aus dem Asklepieion von Kos. Archiv f
  ür Religionswissenschaft 10: 201–228.
- Herzog R (1931) Die Wunderheilungen von Epidauros. Ein Beitrag zur Geschichte der Medizin und der Religion. Dietrich, Leipzig.
- Homer (2003) Iliad. Books 1–12. Translated by A. T. Murray and revised by W. F. Wyatt. Cambridge, Mass.: Harvard University Press.
- Hornblower S, Spawforth AJ, Eidinow E (Eds) (2012) The Oxford classical dictionary. Fourth edition. Oxford: Oxford University Press.
- Interdonato E (2013) L'Asklepieion di Kos. Archeologia del culto. L'Erma Di Bretschneider. Roma.
- Israelowich I (2015) Patients and healers in the High Roman Empire. Baltimore: Johns Hopkins University Press.
- Krug A (1993) Heilkunst und Heilkult. Medizin in der Antike. C. H. Beck. München.
- LiDonnici LR (1995) The Epidaurian miracle inscriptions. Text, translation, and commentary. Atlanta, Ga: Scholars Press.

- Livy (1926) History of Rome. Translated by B. O. Foster. Cambridge, Mass.: Harvard University Press.
- Männlein-Robert I (2015) Iamatika. In Seidensticker B, Stähli A, Wessels A (Eds) Der Neue Poseidipp: Text – Übersetzung – Kommentar. Wissenschaftliche Buchgesellschaft: Darmstadt. P. 343–374.
- Meier CA (1967) Ancient Incubation and Modern Psychotherapy. Illinois: Northwestern University Press.
- Meyer M (1988) Erfindung und Wirkung. Zum Asklepios Giustini. Mitteilungen des Deutschen Archäologischen Instituts. Abteilung Athen 103: 119–159.
- Müller H (2011) Pergamon als Polis. Institutionen, Ämter und Bevölkerung. Grüssinger R (Ed.) Pergamon. Panorama der antiken Metropole. Begleitbuch zur Ausstellung. Eine Ausstellung der Antikensammlung der Staatlichen Museen zu Berlin. Imhof. Petersberg. P. 254–259.
- Petridou G, Thumiger C (Eds) (2016) Homo patiens. Approaches to the patient in the ancient world. Brill. Leiden.
- Petsalis-Diomidis A (2010) "Truly beyond wonders". Aelius Aristides and the cult of Asklepios. Oxford, New York: Oxford University Press.
- Porter R (Ed) (1985) Patients and practitioners. Lay perceptions of medicine in pre-industrial society. Cambridge: Cambridge University Press.
- Radt W, Pirson F (2016) Pergamon. Geschichte und Bauten einer antiken Metropole. Philipp von Zabern. Darmstadt.
- Renberg GH (2017) Where Dreams May Come: Incubation Sanctuaries in the Greco-Roman World. Brill, Leiden.
- Riethmüller JW (2005) Asklepios. Heiligtümer und Kulte. 2 Vols. Verlag Archäologie und Geschichte. Heidelberg.
- Riethmüller JW (2012) Das Asklepieion von Pergamon. Grüßinger R, Geske I, Scholl A (Eds) Pergamon. Panorama der antiken Metropole. Begleitbuch zur Ausstellung. 2nd edition. Imhof. Petersberg. P. 229– 234.
- Russell DA, Trapp MB, Nesselrath H-G (Eds) (2016) In Praise of Asclepius. Selected prose hymns. Mohr Siebeck, Tübingen.
- Rüttimann, RJ (1986) Asclepius and Jesus. The form, character and status of the Asclepius cult in the second-century C.E. and its significance in early christianity. Ph.D. Harvard University, Cambridge, Mass.
- Schouten J (1967) The Rod and Serpent of Asklepios. Symbol of medicine. Amsterdam: Elsevier Publishing Company.
- Seidensticker B, Stähli A, Wessels A (Eds) (2015) Der Neue Poseidipp:
   Text Übersetzung Kommentar. Wissenschaftliche Buchgesellschaft, Darmstadt.
- Sobel H (1990) Hygieia. Die Göttin der Gesundheit. Wissenschaftliche Buchgesellschaft, Darmstadt.
- Stafford EJ (1998) Greek Cults of deified Abstractions. Ph.D. Thesis. University College. London.

- Steger F (2000) Erinnern an Asklepios. Lektüre eines gegenwärtigen Mythos aus der antiken Medizin. In von Jagow B (Ed.) Topographie der Erinnerung – Mythos im strukturellen Wandel. Königshausen & Neumann,Würzburg. P. 19–39.
- Steger F (2004) Asklepiosmedizin. Medizinischer Alltag in der römischen Kaiserzeit. Franz Steiner Verlag, Stuttgart.
- Steger F (2005a) Der neue Asklepios Glykon. Medizinhistorisches Journal 40: 3–18.
- Steger F (2005b) Wasser erfassen Wasser wahrnehmen. Religiöse, soziale und medizinische Funktionen des Wassers: Kult und Medizin des Asklepios. Hähner-Rombach S (Ed.) "Ohne Wasser ist kein Heil". Medizinische und kulturelle Aspekte der Nutzung von Wasser. Franz Steiner Verlag, Stuttgart. P. 33–43.
- Steger F (2007) Patientengeschichte eine Perspektive f
  ür Quellen der Antiken Medizin? 
  Überlegungen zu den Krankengeschichten der Epidemienb
  ücher des Corpus Hippocraticum. Sudhoffs Archiv 91: 230–238.
- Steger F (2016) Aristides, Patient of Asclepius in Pergamum. Russell DA, Trapp MB, Nesselrath H-G (Eds) In praise of Asclepius. Selected prose hymns. Mohr Siebeck, Tübingen. P. 129–142.
- Steger F (2018) Asclepius. Medicine and Cult. Franz Steiner Verlag: Stuttgart.
- Tomlinson RA (1983) Epidauros. Austin, Tx.: University of Texas Press.
- Ursin F, Steger F, Borelli C (2018) Katharsis of the skin. Peeling applications and agents of chemical peelings in Greek medical textbooks of Graeco-Roman antiquity. Journal of the European Academy of Dermatology and Venereology 32: 2034–2040.
- van Gennep A (1909) Les rites de passage. Étude systématique des rites de la porte et du seuil, de l'hospitalité, de l'adoption, de la grossesse et de l'accouchement, de la naissance, de l'enfance, de la puberté, de l'initiation, de l'ordination, du couronnement, des fiançailles et du mariage, de funérailles, des saisons, etc. Librairie Stock. Paris.
- van Staden, PJ (1998) Jesus and Asklepios. Ekklesiastikos Pharos 80: 84–111.
- Vitruvius (1998) On Architecture. Books 1–5. Translated by F. Granger. Cambridge, Mass.: Harvard University Press.
- Wacht M (1999) Inkubation. In Reallexikon f
  ür Antike und Christentum 18: 179–265.
- Walde C (2001) Antike Traumdeutung und moderne Traumforschung. Artemis & Winckler. Düsseldorf, Zürich.
- Weinreich O (1909) Antike Heilungswunder. Untersuchungen zum Wunderglauben der Griechen und Römer. Töpelmann, Gießen.
- Wickkiser BL (2010) Banishing Plague. Asklepios, Athens, and the great plague reconsidered. Jensen JT (Ed.): Aspects of ancient Greek cult. Context, ritual and iconography. Aarhus: Aarhus University Press. P. 55–65.

## About the author

Florian Steger – Professor, Dr., Institute of the History, Philosophy and Ethics of Medicine, Ulm University, Germany; FSAEI HE I.M. Sechenov First MSMU MOH Russia (Sechenov University), Moscow. E-mail: florian.steger@uni-ulm.de