

# Pseudo-Galen, *al-Adwiya 'l-maktūma*, with the commentary of Ḥunayn ibn Ishāq

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## Abstract

Medieval Arabic bibliographers report the existence of a treatise attributed to Galen and commented upon by Ḥunayn bearing the title *al-Adwiya al-maktūma* (“The Hidden Drugs”), but no copies were known to exist. We have identified, and publish here for the first time, an incomplete copy, transcribed into Hebrew characters. It turns out that this is the text later translated into Latin and published in the Renaissance under the title *De plantis*. A comparison between the Latin and Arabic texts, as well as a discussion of the material medica to the extent that we have been able to identify them, are also provided.

## I. Introduction

We present here a short, enigmatic, and intriguing text dealing with medicine, botany, and the occult. It is extant in a single manuscript, Sassoon 573, pages 275-283, a codex of mainly medical treatises, Arabic in Hebrew characters, written in a Yemeni hand of the thirteenth century.<sup>1</sup> It bears the long title, *al-Adwiya 'l-maktūma allatī ḍanna 'anhā Jālīmūs*

<sup>1</sup> See the description of the codex in David Solomon Sassoon, *Ohel Dawid*, volume 1 (London, 1932), pp. 505-508. Our treatise, no. 6 according to the catalogue, is called there תפסיר חנין אבן אצחאק. The opening passage is copied out accurately, but no additional information about the treatise is provided. The text is published with the kind permission of the current owner, David S. Sassoon.

*'an 'l-īdāh bihā...Tafsīr Ḥunayn ibn Ishāq (The hidden drugs which Galen withheld from revealing ... The commentary of Ḥunayn ibn Ishāq).*<sup>2</sup> It thus purports to be a work by Galen with the commentary of Ḥunayn ibn Ishāq. A work bearing this title is mentioned as well by Ibn Abī Uṣaybi'a in his history. The title appears there in a slightly different form: *Kitāb fī l-adwiya 'l-maktūma allati kanā 'anhā fī kutubihī wa-ramazahā (On hidden drugs which he [merely] alluded to and hinted at in his [other] writings).*<sup>3</sup> Ibn Abī Uṣaybi'a lists it among the works that are attributed to Galen according to the translation (*naql*) of Ḥunayn and others, but adds that it is not mentioned at all by Ḥunayn in the list of Galenic works that he (Ḥunayn) and others translated into Arabic. All in all, we see no reason to doubt its authenticity as one of the writings of Ḥunayn.<sup>4</sup>

A Latin version of the complete text is extant, and it has received but little attention. The fullest description is to be found in a short article of Lynn Thorndike, on the basis of which it became clear to us that the Sassoon manuscript holds the original of the text known in Latin as *De plantis*, and also (as in the Arabic), *De medicinis occultis*.<sup>5</sup> The Latin exists in several versions, all of which display the forty-six items promised in the sub-title. Sassoon 573 exhibits the substances in the same order, but it breaks off after no. 33 according to the Venice, Junta 1565 edition. An additional recipe for the improvement of memory (presumably added by a copyist) is appended to the Arabic. The great majority are indeed vegetable, but there are also some animals and minerals.

For ease of comparison we tabulate here, in the left column, the numbered items in the Latin text and, in the right column, the corresponding paragraphs from our edition of the Arabic. Thorndike transcribed the names from one of the Latin manuscripts (Vatican Palatina

<sup>2</sup> A slightly different title is reported by Ibn Abī Uṣaybi'a; see below.

<sup>3</sup> Ibn Abī Uṣaybi'a, *'Uyūn al-anbā' fī Ṭabaqāt al-aṭibbā'*, ed. August Müller, reprinted Beirut, 1981, part 1, p. 154 (see also the new edition, Beirut n.d., p. 149); see also Fuat Sezgin, *Geschichte des arabischen Schrifttums*, vol. 3 (Frankfurt, 1970), pp. 129 and 256.

<sup>4</sup> For an English translation of the passages as it is exhibited by Ibn Abī Uṣaybi'a, as well as a discussion of the more noteworthy variants, see the commentary to passages 1-2. See also Max Meyerhof, "Über echte und unechte Schriften Galens, nach arabischen Quellen," *Sitzungsberichte der Preussischen Akademie der Wissenschaften. Phil. -hist. Klasse* 28 (1928): 533-548, p. 543, no. 68: "Eine Schrift über die Geheimmittel (*Secreta, Liber Secretorum*)...", who, on the basis of the passage from the introduction included in Ibn Abī Uṣaybi'a's report, indicates that Ḥunayn is the author ("Das vorliegende Bruchstück trägt ganz den Stil Ḥunayn's").

<sup>5</sup> Lynn Thorndike, "The Pseudo-Galen, De Plantis," *Ambix* 11 (1963), 87-94.

1234), and these often differ from those found in Junta 1565; however, the substances are the same.

| <i>Lat.</i><br><i>no.</i> | <i>Ar.</i><br><i>§</i> |
|---------------------------|------------------------|
| 1                         | 3,4,5                  |
| 2                         | 6,7                    |
| 3                         | 8,9                    |
| 4                         | 10,11                  |
| 5                         | 12,13                  |
| 6                         | 14,15                  |
| 7                         | 16,17                  |
| 8                         | 18,19                  |
| 9                         | 20,21                  |
| 10                        | 22,23                  |
| 11                        | 24,25                  |
| 12                        | 26,27                  |
| 13                        | 28,29                  |
| 14                        | 30,31                  |
| 15                        | 32,33                  |
| 16                        | 34,35                  |
| 17                        | 36,37                  |
| 18                        | 38,39                  |
| 19                        | 40,41                  |
| 20                        | 42,43                  |
| 21                        | 44,45                  |
| 22                        | 46,47                  |
| 23                        | 48,49                  |
| 24                        | 50,51                  |
| 25                        | 52,53                  |
| 26                        | 54,55                  |
| 27                        | 56,57                  |
| 28                        | 58,59                  |
| 29                        | 60,61                  |
| 30                        | 62,63                  |
| 31                        | 64,65                  |
| 32                        | 66,67                  |
| 33                        | 68,69                  |

The brief descriptions of simples that make up the text, brought in the name of Galen, are in all likelihood not an authentic writing of the great physician. On the other hand, there are several good reasons to accept the commentary as an authentic work of Ḥunayn ibn Ishāq. The

first is the brief introduction, in which Ḥunayn (in the version displayed in MS Sassoon), informs us that he inspected a number of Greek copies, and, in addition (in both versions), criticizes an earlier commentary (he does not tell us in which language that gloss was written), and adds that his commentary was written for Abū Jaʿfar Muḥammad ibn Mūsā. All of this, most notably the connection to the Banū Mūsā, fits well with what we know of the historical Ḥunayn.<sup>6</sup> Additional supportive evidence can be drawn from the references to terms in languages other than Arabic, almost all of them Greek. Unfortunately, most of these transcriptions are left blank in the unique manuscript. (Some are displayed, not very accurately, in the Latin versions; these Latin transcriptions are exhibited in the notes to our text.) Nonetheless, a few are preserved, most notably 'BLYMWS, clearly a corruption of 'BLBSY' or 'BLBSYS, the Greek work for epilepsy (see paragraph 4).<sup>7</sup> That term is cited in the course of a correct and precise reference to a passage in Galen's *On Simples (Peri Kraseos...ton haplon farmakon)*. However, the Arabic version of that text, in the translation of the same Ḥunayn, does not transcribe the Greek term, but rather employs the various forms of the Arabic *ṣ.r.* ' exclusively. (See our comments to paragraph 4.) Thus the Ḥunayn who wrote our commentary had independent access to the Greek text translated by the famous Ḥunayn; the simplest explanation, of course, is that he is the same person as the famous translator.

Valentin Rose, who studied the text in connection with his work on pseudo-Aristotle's *De lapidibus*, suggested that Ḥunayn is the true author of the entire treatise, and not just the commentary. His opinion is noted by Moritz Steinschneider, who gave the work a short notice in his monumental study of the medieval Hebrew translations. No Hebrew translation is extant, but the Latin mentions some Jews who assisted in some way in the Latin translation. Steinschneider thought to be "questionable" the identification of "magister Abraham", in whose name some additional information is brought in the Latin (see below) *De plantis*, with the historical Abraham ben Shem Tov of Tortosa, known to have taken part in the translation of some medical writings from Arabic into

<sup>6</sup> See, e.g., Sezgin, p. 29 (Ḥunayn's introduction to his translation of Hippocrates' *Aphorisms*), or p. 34 (the introduction to his translation of the *Epidemics*); see also the detailed discussion of Ḥunayn's relationship with the Banū Mūsā in Gerrit Bos and Vivian Nutton, *Galen on Problematical Movements. Critical editions of the Arabic text and Latin translations* (forthcoming).

<sup>7</sup> It is likely that the form found in the manuscript is a hypercorrection on the part of the Jewish copyist, who was familiar with the illness still known today as bulimus ("ravenous hunger"), and which is mentioned in the Mishnah Yoma 8:6.

Latin.<sup>8</sup> The question was taken up by other scholars as well, most recently by Samuel Kotték, who cautiously observed that we do not possess enough information to draw any firm conclusion.<sup>9</sup> By the way, Steinschneider also referred to several printings of the text in Renaissance editions of Galen's *Opera omnia*; for some reason, Thorndike did not take note of these. Several of these are now accessible to all on the internet.<sup>10</sup>

We have made use of one of these editions, namely Junta (Venice) 1565, for the purpose of emending obvious errors in the Sassoon manuscript, as well as for supplementing hiatuses, especially with regard to the Greek names of the plants, which are almost always missing in the Sassoon manuscript. However, in some cases the Latin does not display the Greek original in transcription, but the Romance equivalent, as, for instance, in items 7 and 15 (paragraphs 17 and 33 in our text). In the apparatus we only provide the Latin variant in the case of corruptions, mistakes and doubtful or unclear terms and passages in the Judaeo-Arabic text. We have not registered all the deviant readings and additions featuring in the Venice edition.

In a number of places the Latin text adds some information supplied by a collaborator of the translator. These differ considerably among the Latin editions and manuscripts; much of the data that Thorndike reports either in the name of Iudeus or Abraham (see the chart on pp. 90-92 of his study) is missing in the Junta 1565 printing that we have chosen to consult, which, however, may contain data missing from Thorndike's texts. Referring now only to Junta 1565, we observe that, in all cases save one, the informant is simply called Iudeus (items 17, 18, 21, 31, in the numbering of the Latin). These are usually brief remarks, most often suggesting a different identification of the simple than that given by the translator; see, e.g., item 31, where Iudeus correctly identifies the bird as the quail rather than the raven. In one case (item 21; see our commentary) Iudeus cites Avicenna. "Magister Abraham", who clearly is not the same informant as Iudeus, is cited in item 24, where he provides additional information about papyrus. Interestingly, "Magister Abraham" mentions the druggists (*apothecarii*) of Alexandria. In general, we limit

<sup>8</sup> Moritz Steinschneider, *Die hebraeischen Uebersetzungen des Mittelalters* (Berlin, 1893), p. 972.

<sup>9</sup> Samuel S. Kotték, "Le Petit Traité de Thérapeutique. Manuscrit inédit d'Abraham ben Chem Tov," in J. Leibowitz et al., eds., *Suesmann Muntner Memorial Volume*, (Jerusalem, 1983), 31-68, esp. pp. 32-33.

<sup>10</sup> These have been placed online along with other important and rare texts at the following URL: <<http://www.bium.univ-paris5.fr/histmed/medica>>. Hats off to our French colleagues; this is an invaluable resource!

ourselves in the notes or commentary to variants that concern nomenclature.

As is common when dealing with the occult, our treatise purports to contain information that “Galen” deliberately withheld from the “generality of people”. However, there is a very specific and unusual meaning to the secrecy employed by “Galen” in our tract. It refers to the code-names, or roundabout way of referring to the plants, animals, and minerals whose medicinal properties “Galen” describes. These take the form, for example, of “the tall plant that grows on the banks of rivers” (paragraph 18), “the plant that grows on the outskirts of cities” (paragraph 32), or “the stone that is called ‘the eagles’ impregnator” (paragraph 66). In the last example, the stone has indeed come to be known as the “eaglestone” (see our commentary to paragraph 66). Hunayn’s main task is to give the item its proper technical name, in Arabic, Greek, and/or Syriac. He often adds some more information concerning the therapeutic properties of the item in question.

Due to the state of the unique manuscript, which has many omissions and unclear words, we have not been able to identify some of the items. In most cases where we have succeeded, however, the *materia medica* belong to the pre-modern pharmacopoea; they ought not be classified as magical. This is particularly true if we recall that medieval “scientific” medicine was forced, however grudgingly, to recognize the medicinal value of substances whose efficacy had been demonstrated by “experience” (*tajriba*), even if no scientific explanation could be provided. Perhaps the most famous example of this is the alleged cure for epilepsy by means of a necklace of peony--and this cure is indeed included in our text (see paragraphs 3 and 4, with our commentary).

This study is divided as follows. In the following section we offer our translation of the text. Modern nomenclature of the plants is supplied in parentheses for those which we have been able to identify. Our paragraph-by-paragraph commentary comprises the third section. Finally, in the fourth section, we exhibit the text, exactly as it appears in the unique manuscript; we have not attempted to “correct” diacritical points, long vowels, and so forth. However, corruptions affecting the meaning of the text have been emended to the best of our ability. Footnotes to the text and translation are directly related to the establishment of the text; all other remarks are reserved for the commentary.

## II Translation<sup>11</sup>

{1} [275] The hidden drugs which<sup>12</sup> Galen alluded to and hinted at, but did not reveal, from among [the things] that he gained from experience. The commentary of Ḥunayn ibn Ishāq.

{2} **Said Ḥunayn:** The aim [276] of Galen in this book is to describe that which he gathered in the course of his life concerning drugs having wondrous special properties. He experimented with them many times. However, he did not write down his experience with them, thus hiding it from most people, but only hinted at them. Only people of distinction, those possessing understanding, discernment, and intellect(s) were able to become appraised of them. He did not explicate them for the generality of people, but he recorded them for people of intellect and knowledge, and for the person who is up to the challenge of learning them. I<sup>13</sup> looked at (?) more than one copy, collecting that which was correct. I experimented with it, tested it, and cured with it, because someone else [also] commented on this book. However, he did not understand his teacher, and he was weak. He added to it things that don't belong, and he omitted that whose import he did not understand. When I was asked to comment upon this book, I applied myself to it, exerting myself as far as possible, and in view of my ability. I compared it with a number of Greek versions which I had collected from it. I commented upon it in Arabic, for Abū Ja'far Muḥammad ibn Mūsā.

{3} **Commentary on the Remedies and Drugs, and it consists of 4[6] chapters, [i.e.] remedies. Said Galen:** The tree that is called the tamarisk is effective for epilepsy. If its buds are hung around a person, he will never suffer from epilepsy at all. It is also effective against lethal poisons and the bites of vermin, if the one who is bitten and the one who has been given poison to drink imbibes it.

{4} **Said Ḥunayn:** When he said, “the fragrant (?) tamarisk”, Galen means a wood that is called *al-fāwaniyā* (peony) (*Paeonia corallina* Retz. or *Paeonia foemina* Garsault), because<sup>14</sup> the good [kind?] of that wood is the

<sup>11</sup> Symbols: [...] = blank space in MS Sassoon; L = Pseudo Galen, ed. Junta, Venice 1565.

<sup>12</sup> Which Galen alluded to and hinted at, but did not reveal, from among from among [the things] that he gained from experience: which Galen did not want to make public and write down in his other books and which have been tested and found to be good L. Our translation follows our emendation of the text, as noted in the edition.

<sup>13</sup> I looked at (?) more than one copy: more than one version came to my attention L.

<sup>14</sup> Because the good [kind?] of that wood is the cross (?) [...] hard, like the cross (?) that is in the wood of the tamarisk. The Latin text is corrupt as well, it probably means: which

cross (?) [...] hard, like the cross (?) that is in the wood of the tamarisk, except that *al-fāwaniyā* has black wood and a licorice-like (?) color. For that reason it is called “the [...] tamarisk”. This wood, I mean *al-fāwaniyā*, is also called “*al-kahyānā*”. Galen claimed that if this wood is hung around someone with the disease called “BLYMWS”,<sup>15</sup> which is the disease of epilepsy, it cures him. Its description is: it has a sharp smell, of black color—I mean its exterior. As for its interior, it is white, and the best kind is the hard one. Galen mentioned that he met someone suffering from epilepsy. He hung it around him, and the epilepsy went away. He thought that the disease was [completely] eliminated, so they took it off of him, and the epilepsy returned. He ordered that it be hung around him [again], and the epilepsy left him. Once again he removed it, and it returned again.

**{5} Said Ḥunayn:** I experimented with it several times, and I found it to be correct, as Galen said. Rufus has an independent tract about this.

**{6} Said Galen:** The menses of the tree that menstruates blood is effective for pain of the stomach and womb and for the coarse winds that originate from it and it is effective for scaly rash.

**{7} Said Ḥunayn:** In saying, “the tree that menstruates blood” he means the *umm ghaylān* tree. It is a tree of many thorns; its thorns are larger than those of boxthorn (lycium). It grows plentifully along the roads of the Hijāz. It has a flower with round tips (?) that are joined together, not separated. Its flower has a thin stem, like the stem of the violet (*Viola odorata* L.), but its [stem] is smaller in length than it. It<sup>16</sup> has a pleasant smell, wine-like, wondrous, fragrant, [...] a perfume is made from its flower by the perfumers in Iraq. It has a red resin that is called [...]<sup>17</sup>, and that is its menses. Sometimes something that looks like blood flows over its stem.

**{8} Said Galen:** The plant that grows between graves is effective against pains of the joints, cold winds, difficulty in childbirth, winds of the wombs, toothache, and chronic gout.

**{9} Said Ḥunayn:** He means by that the harmel (*Peganum harmala* L.) plant, which is found in many electuaries and pills.

is that plant that is called “peony” with us, as it is like that plant that however you break it (?) its cross (?) remains intact, like the cross that is in the plant Alatel.

<sup>15</sup> “BLYMWS”, a corruption of “BLBSY” or “BLBSYS”; see note 5 to the introduction.

<sup>16</sup> It has a pleasant smell, wine-like, wondrous, fragrant, [...]: It has an odor that is fragrant, wine-like, and by far more fragrant than the scent of the rose L.

<sup>17</sup> [...]: adendam L.



**{10} Said Galen:** The plant whose seeds and grains are fodder for the wild dove, that is, *al-ayl*, has leaves that stop bleeding<sup>18</sup> and heal wounds at once; there is therein no need at all for any [additional] medication. It firms flaccid joints, and it is effective against lethal drugs.

**{11} Said Ḥunayn:** In saying “the plant whose seeds and grains are fodder for the wild dove”, he means “goatsbeard” (*Tragopogon pratensis* L. or *porrifolius* L.) and this grass is the plant called “Cistus”. The<sup>19</sup> best sort is the broom-rape (*Cynomorium coccineum* L.) If the broom-rape is pounded fine and mixed into pills, it is effective against diarrhea and stops dysentery and bleeding.

**{12} Said Galen:** The tree which, when one paints one's hand with it together with henna, stops [excessive] menstruation, and is effective against the bite of lethal vermin. It<sup>20</sup> opens obstructions, causes [a tumor in] the spleen to dissolve, and makes vision clearer.

**{13} Said Ḥunayn:** It is gentian (*Gentiana lutea* L.).

**{14} Said Galen:** The tree that grows in India, and which beetles do not approach, increases memory; it strengthens the mind and the nerves, improves the complexion, increases sexual vigor and strengthens the erection if the penis is rubbed with it.

**{15} Said Ḥunayn:** It is the “marsh-nut” (*Semecarpus anacardium*). That is, if beetles approach this tree, they all die. If one smears its honey on the penis, it strengthens it; its strength and its erection are increased. Its special property is to clarify the mind.<sup>21</sup>

**{16} Said Galen:** The wood and seed of the tree that is cut before<sup>22</sup> it is pulled out, and their extracts, are effective against lethal drugs, the bite of vermin, earache, epilepsy, and draw out superfluities from the head.

**{17} Said Ḥunayn:** It is the balm-tree (*Commiphora opobalsamum*), because [if] it is cut, that is its seed, the oil flows out of it. If one cuts [the tree itself], and its oil comes out, it dies.

**{18} Said Galen:** The tall tree that grows on the banks of rivers eradicates warts. It is effective against quartan and tertian fever, and opens obstructions.

**{19} Said Ḥunayn:** It<sup>23</sup> is the tree [called] *adhb*.

<sup>18</sup> I mean *al-ayl*, has leaves that stop bleeding: and does not have leaves. It stops bleeding L.

<sup>19</sup> The best sort is the broom-rape: Its root is called Carapit in Arabic L.

<sup>20</sup> It opens obstructions, causes [a tumor in] the spleen to dissolve: It opens obstructions, especially [those] in the spleen L.

<sup>21</sup> Mind: sperm L.

<sup>22</sup> Before it is pulled out: om. L.

**{20} Said Galen:** The tree which dyers use is beneficial against smallpox and leaden-[colored] swelling[s]. It strengthens the stomach and the gums, checks “nature” [the stools], it [can be used] to plaster the feeble parts of the body. It is beneficial against anal prolapse in youngsters.

**{21} Said Hunayn:** It is the tamarisk gallnut, and it is the fruit of the tamarisk.

**{22} Said Galen:** The tree that grows in the interiors of *wādis*, but is not [found] in the sides of the *wādi*, eliminates the lust for intercourse, dries the sperm, strengthens the back, sharpens eyesight, and eliminates the slackness (feebleness) of the parts of the body.

**{23} Said Hunayn:** He means the chaste tree (*Vitex agnus castus* L.). It is also called Miriam's tree. Its seed is like the seed of the eggplant (*Solanum melongena* L.).

**{24} Said Galen:** The malodorous plant whose cones (fruits) resemble kidney beans: if a woman swallows from its seeds one whole seed she will not become pregnant for a year, and<sup>24</sup> likewise every [other] seed [that she takes counts] for [another] year [that she will not become pregnant].

**{25} Said Hunayn:** He means the plant that is called [...].<sup>25</sup>

**{26} Said Galen:** The plant that has in its middle a raceme like the raceme of the banana tree kills worms and reptiles. Whoever colors his eyelids with one of its seeds will find it beneficial against ophthalmia and blariness. It is beneficial against unilateral headache and [pain in the] eye, and cures running eyes.

**{27} Said Hunayn:** He means the white hellebore plant (*Veratrum album* L. and Var.).

**{28} Said Galen:** The<sup>26</sup> plant that has in it something like the tamarisk. If the taker takes three of its seeds and puts them [...]<sup>27</sup>, their (!) command will be obeyed by women.<sup>28</sup> The seed of this plant is helpful for epilepsy and hallucinations.

<sup>23</sup> It is the tree [called] *adhb*; L reads: Galen means when he says the tall tree etc. the willow. If one produces purified juice from the willow and administers it to someone suffering from quartan fever, it stays the paroxysm; it has been tested.

<sup>24</sup> And likewise every [other] seed [that she takes counts] for [another] year [that she will not become pregnant]; cf. L: and if she takes more, she will postpone her pregnancy so many years as she took seeds.

<sup>25</sup> [...]: planta *Xilocarapte* L.

<sup>26</sup> The plant that has in it something like the tamarisk: The plant with which beasts of burden are cured, if [...] L.

<sup>27</sup> [...]: in a string and suspends it around the neck L.

<sup>28</sup> Women: men L.

{29} **Said Ḥunayn:** He intends here the [...] <sup>29</sup>plant, which is called [...] <sup>30</sup>in Greek <sup>31</sup>; and it is called “black nightshade” (*Solanum nigrum* L.) <sup>32</sup>.

{30} **Said Galen:** The plant that grows between the vineyards whose wood is square: if its leaves are pounded, and kneaded with vinegar, and given to the person suffering from [...] <sup>33</sup> to drink, it cures him. Whoever drinks from its juice will hardly become inebriated from wine. If a pregnant woman drinks from the water of this tree, she will miscarry the fetus.

{31} **Said Ḥunayn:** He means by this the black nightshade plant.

{32} **Said Galen:** The tree that grows on the outskirts of cities: when something of it is hung around the leper, he is cured of his leprosy. If he is fumigated with it when he suffers from epilepsy, he recovers from his epilepsy. If it is cooked with wine and honey, and given to someone suffering from strangury or pain of the waist to drink, the illness is cured.

{33} **Said Ḥunayn:** He means the [...] <sup>34</sup> plant, and it is called [...] <sup>35</sup> in Greek.

{34} **Said Galen:** The tree which [causes] male birds to drop dead when they alight upon it is useful for the bite of vermin, cold winds, and hard swellings. It clears gout, adds sexual vigor, and strengthens the erection. If one fumigates with it, it removes quartan fever.

{35} **Said Ḥunayn:** He means henbane (*Hyoscyamus niger* L.) and its [...] It is one species of the [different species] of the *banj* which is called in Persian [...]. <sup>36</sup> It is an Indian tree.

{36} **Said Galen:** The tree which, if a pregnant woman looks at it, she miscarries and the fetus dies within her.

{37} **Said Ḥunayn:** He <sup>37</sup> means the ‘DR’WZN (?) tree. It is called in Arabic “strawberry-tree” (*Arbutus unedo* L.). <sup>38</sup>

<sup>29</sup> [...]: Aratir L.

<sup>30</sup> [...]: Ymbralicas L.

<sup>31</sup> Greek: Romance L.

<sup>32</sup> Black nightshade (*Solanum nigrum* L.): juniper fruit L.

<sup>33</sup> [...]: tenesmus L.

<sup>34</sup> [...]: eryngium (?) L.

<sup>35</sup> [...] in Greek: Archanus in Romance L.

<sup>36</sup> [...]: Alsmear L.

<sup>37</sup> He means the ‘DR’WZN (?) tree. It is called in Arabic “strawberry-tree” (*Arbutus unedo* L.): Galen means the plant that is called in Arabic “father-killer” (strawberry tree), and in Greek it means “akoniton” (leopard’s bane). Iudaeus says that we call this plant “Lupanaria” L.

<sup>38</sup> Strawberry-tree (*qātil abīhi*): lit. murderer of his father, so called because its fruits do not dry out before the emergence of a new shoot of the plant replacing them; cf. M 328.

**{38} Said Galen:** The tree which, if flying creatures, that is bats eat its leaves and smell its scent, they die within the hour. It is beneficial against inflamed tumors, and its ashes are beneficial against putrid ulcers.

**{39} Said Ḥunayn:** He means the “plane-tree” (*Platanus orientalis* L.), and<sup>39</sup> it is [also] called *as-sant* (acacia tree, *Acacia nilotica* or *Acacia senegal*).

**{40} Said Galen:** The plant that is called “the sandal”<sup>40</sup> opens obstructions, takes away superfluities, helps against [quartan] fever and hard<sup>41</sup> tumors.

**{41} Said Ḥunayn:** He intends here the clover (lesser) dodder (*Cuscuta epithimum* L.) [plant]. It is called by that name because it has no roots, it has veins which entwine itself around trees, without roots.

**{42} Said Galen:** The tree [...] <sup>42</sup> that is called [...] <sup>43</sup> dissolves swellings, dries ulcers, helps in the case of pain of the ears, increases sexual vigor and strengthens the organs.

**{43} Said Ḥunayn:** He means the [...] <sup>44</sup> tree [280]. It<sup>45</sup> is called the SQT tree, and it is called by that name because the fruit of this tree ripens (?) within it. If it is rubbed upon a fence or tree or wood, no bird will alight upon it without becoming stuck. Hunters use it a lot.

**{44} Said Galen:** The tree that is called “Indian almond” increases the strength of the organs, sexual vigor, and memory. It strengthens the nerves and it is helpful for the brain.

**{45} Said Ḥunayn:** He means a tree that grows in India, which is called “Indian nut” (?)...<sup>46</sup>

**{46} Said Galen:** The tree that is called “the hernia” dries up moisture, and it is useful in the case of swellings that come about. It is called the “hernia tree” because if it is pounded and placed upon the hernia that occurs in the lower part of the hips, the hernia is healed and benefits from it.

<sup>39</sup> He means the “plane-tree” (*Platanus orientalis* L.), and it is [also] called *as-sant* (acacia tree, *Acacia nilotica* or *Acacia senegal*): Galen means the pistachio tree. Iudeus says that it is glaucus (*Chelidonium maius*) which is used by the dyers L.

<sup>40</sup> The sandal: wild purslane L.

<sup>41</sup> “Hard”: inflamed L.

<sup>42</sup> [...]: which when birds alight upon it get stuck to so that they cannot raise themselves from it L.

<sup>43</sup> [...]: digil (?) L.

<sup>44</sup> [...]: viscous L.

<sup>45</sup> It is called the SQT tree: In Greek it is called “aliscat” L.

<sup>46</sup> Indian nut (?): tamarisk L. MS Sassoon here is corrupt; L is more penetrable. See the commentary.

{47} **Said Ḥunayn:** He intends the tree [...] <sup>47</sup>.

{48} **Said Galen:** The tree that is called “the bearer of great strength”<sup>48</sup> is useful in the case of inflamed tumors. It checks a loose belly, cuts the matter of yellow bile, and it is employed in foods in general.

{49} **Said Ḥunayn:** He means the plant that is called “fresh coriander” (*Coriandrum sativum* L.).

{50} **Said Galen:** The plant that is called “the speaking tongue and the penetrating command”: if it is burned and sprinkled on the place from which blood flows, it will check it. It is useful in the case of gangrenous sores in people. It dries out ulcers and checks menstrual blood, if it is applied in a suppository.

{51} **Said Ḥunayn:** He means the reed plant (*Cyperus papyrus* L.) from which papyri are made. When papyri are burned, they have the same effect as that plant, and they are useful in the case of the illnesses that he mentioned. He called it by that name because<sup>49</sup> they convey the written message after an interval.

{52} **Said Galen:** The plant that is called “the menses tree” is useful in the case of strangury, the bite of vermin, ischias, and excess (?) blood<sup>50</sup> in the bladder.

{53} **Said Ḥunayn:** He intended the [...] plant.<sup>51</sup> It<sup>52</sup> is called in Arabic “the golden plant” [...]. It is called “the menses tree” because its leaves, when they are pounded and applied in a suppository [stop] the excessive [menstruation] at once.

{54} **Said Galen:** The plant [...] <sup>53</sup> is useful in case of [illegible] pain, dries up ulcers, dissolves superfluities [...] <sup>54</sup>; it has wonderful diluting properties.

{55} **Said Ḥunayn:** He intends the celandine (*Chelidonium majus*), because it has the capacity to cure the eye. Especially when it is pounded alone [and applied] as a collyrium, it eliminates every ailment that is due to scabs, heaviness, wind (pneuma), and the like.

<sup>47</sup> [...]: that is called cypress nut L.

<sup>48</sup> The bearer of great strength: the reddish one, has great strength L.

<sup>49</sup> Because they convey the written message after an interval: because we speak and transmit our words by means of papyrus, that is in letters L.

<sup>50</sup> And excess (?) blood: and blood accumulated L.

<sup>51</sup> [...] plant: the plant that is called “mederat” L.

<sup>52</sup> It is called in Arabic “the golden plant” [...]: that is, the golden plant because its leaves have the color of gold L.

<sup>53</sup> [...]: that is called “eyelashes” L.

<sup>54</sup> [...]: and makes the flesh grow (i.e. promotes cicatrization) L.

**{56} Said Galen:** The plant that is called “the lamp of darkness”—it is one of the lethal drugs if it is not administered properly—it is one of the [emetics]. It should not be used as a drug except for someone<sup>55</sup> who is far away from a doctor. It expels all the phlegm that is harmful and that descends from the head into the stomach. If it is given to drink to someone for whom drinking it is not good, and who cannot withstand its use, it kills when it is imbibed. It increases the flow of urine and menses, if it is taken in measure.

**{57} Said Ḥunayn:** He intends the *dandas* (?) [plant],<sup>56</sup> because it shines in the dark night. When travelers and wayfarers see it, they have no doubt that it is a lamp. However, when they come near to it, they do not see a thing.

**{58} Said Galen:** The plant that is called “man's deception” is helpful in case of palpitation of the heart. It strengthens the brain, and it is helpful in case of epilepsy, facial paralysis, and chronic illnesses, when it is mixed with drugs that balance it. However, if it is taken by itself, and it is done to excess, it is fatal; if less than that [measure] is taken, it intoxicates.

**{59} Said Ḥunayn:** He intends Indian hemp (*Cannabis sativa*) because some men are delighted when they take it with their meal, and others enjoy it, when they swallow it with some drink. It is [also] called “*manj*”.<sup>57</sup>

**{60} Said Galen:** The smell of the [plant] that is called odor-[less]<sup>58</sup> is helpful in all cases in which the “man's deception” is helpful. It too must be balanced just as [the “man's deception”] is to be balanced. Its harm is just like its [“man's deception”] harm.

**{61} Said Ḥunayn:** He intends the black papaver (*Papaver somniferum* L.), from whose juice opium is produced. It is called by this name for the following reason. When its juice, opium, is administered to someone in order to kill him, and the attending physician sees that the [victim] is absolutely incapable of speaking to him, nor can he move at all, if that physician is skillful, he will rub a part of his body briskly with musk, until<sup>59</sup> that part heats up [...]. Then the physician will smell the part that has been rubbed. If he smells the scent of opium, he then knows that he

<sup>55</sup> Someone who is far away from a doctor: a few doctors L.

<sup>56</sup> The *dandas*? [plant]: the plant that is called “white hellebore” L.

<sup>57</sup> *Manj*: cf. G.W. Freytag, *Lexicon Arabico-Latinum* I-IV, Halis Saxonom 1830-1837, vol. 4, p. 213: “Confectio pilulave ex foliis cannabinis in ebrietatem inducens. Ex Pers. BNK ortum” (A pill-like confection prepared from Indian hemp that induces ebriety, from Persian BNK).

<sup>58</sup> [...]: odorless L. MS Sassoon has a lacuna before the word for odor.

<sup>59</sup> Until those parts heats up [...]: until the [massageur feels with the palm of his hand] that the cold parts are heating up L.

has been administered [that ingredient], and he does his utmost to ward off its harm.

**{62} Said Galen:** The [plant] that grows amongst<sup>60</sup> sorghum (*Sorghum vulgare*) checks the blood and dries ulcers. If its leaves are pounded and placed upon a swelling, they dissolve it. It is one of the drugs that are laxative in the extreme.

**{63} Said Ḥunayn:** He intends the<sup>61</sup> [...]. It is known as the “seed of indigo” (*Indigo tinctoria* L.). The wild [type] is of no good [282], but the domestic [type] is good and grows mostly between sorghum.<sup>62</sup> For that reason, Galen kept it hidden, attributing it [instead?] to the places within which it grows.

**{64} Said Galen:** The bird that is called “the casualty of thunder”: the gall of this bird is helpful for headache. Its blood is helpful for earache. If<sup>63</sup> the cruel person eats from the heart of this bird, [he becomes friendly], because its heart [turned] his cruelty [into friendliness].

**{65} Said Ḥunayn:** This bird is called the quail<sup>64</sup> [which] cannot cope with the sound of thunder. When the rainy season comes, this bird goes far out to sea. It withdraws into the depths so as not to hear the sound of thunder; but if it hears it, it dies. When the days of the year come to an end, this bird comes out and betakes itself to the wet areas until [it is] again the rainy season.<sup>65</sup>

**{66} Said Galen:** When a woman places the stone that is called “the eagles' impregnator” on her lap, giving birth is difficult for her. However, if she holds it in her hand or attaches it to her loins, she gives birth on the spot.

**{67} Said Ḥunayn:** He<sup>66</sup> means the stone that has the form of [...] Part of it has the form of a walnut. In the middle there is something that stirs and moves like a snake. If a woman has trouble giving birth, the eagle goes to the land of the mountains, thereby getting the stone from where it knows

<sup>60</sup> Amongst sorghum: amongst other plants L.

<sup>61</sup> The [...] [plant]. It is known as the “seed of indigo” (*Indigo tinctoria* L.): A plant the seed of which is called “seed of indigo” L.

<sup>62</sup> Sorghum: other trees L.

<sup>63</sup> If the cruel person eats from the heart of this bird, [he becomes friendly], because its heart [turned] his cruelty [into friendliness]: When one eats from it (i.e. its heart), it is beneficial for one's [own] heart and it makes it cheerful L.

<sup>64</sup> Quail: raven L.

<sup>65</sup> Iudaeus thinks that it is the qualula (?) L.

<sup>66</sup> He means the stone that has the form of [...] Part of it has the form of a walnut. In the middle there is something that stirs and moves like a snake: Galen means the stone that has a little stone inside it like a bracelet, and that is sensed when shaken, and it has the size of a nut L.

to be its place and brings it to the woman, relieves her from her pains, and extracting from her the eggs. This stone is found only in eagles' nests. The<sup>67</sup> Rum call it [...].

**{68} Said Galen:** The [plant] that is called the “cooler of the glowing heat” is helpful in case of severe headache that is due to strong vapors of yellow bile. If it is placed upon [the patient], relief begins for him immediately, and his pain is removed. If it is placed in a home where [people suffer from] fever, fever departs from it.

**{69} Said Ḥunayn:** He means the [plant] that is called in Greek [...].<sup>68</sup> It is called “cooler of the glowing heat” because if someone takes it and [enters] the bathhouse, its heat cools off until nothing is left of it and it is [completely] cold. It is Chinese cinnamon (*Cinnamomum ceylanicum* Nees.).

**{70} To [improve] memory:** Three drams of celery (*Apium graveolens*) seed, an equal [amount] of cumin of Kirmān (*Carum nigrum* ROYLE), an equal [amount] of [...], and an amount similar to the whole of crystalline sugar. It should be pulverized and ingested for three days [...]. **This is the end.**

### III. Commentary

#### Abbreviations:

BAY: Ibn al-Bayṭār, *Tafsīr Kitāb Diāsqūrīdūs. Commentaire de la “Materia Medica” de Dioscuride*. Edité par Ibrāhīm Ben-Mrad, Beyrouth 1990.

D = Dozy, R.P.A., *Supplément aux Dictionnaires arabes*. Second edition. 2 vols. Leiden 1927.

DN = W.F. Daems, *Nomina Simplicium Medicinarum ex Synonymariis Medii Aevi Collecta. Semantische Untersuchungen zum Fachwortschatz hoch- und spätmittelalterlicher Drogenkunde (Studies in Ancient Medicine*, ed. by J. Scarborough 6). Leiden 1993.

DT = *Dioscurides Triumphans. Ein anonym arabischer Kommentar (Ende 12. Jahrh. n. Chr.) zur Materia medica*. Arabischer Text nebst kommentierter deutscher Übersetzung hrsg. von Albert Dietrich. (Abh. der Akad. der Wiss. in Göttingen, Phil. Hist. Klasse, Dritte Folge, Nr. 172). I-II, Göttingen 1988.

<sup>67</sup> The Rum call it [...]: In Romance it is called “immarion”, I think that it means stone of the pregnant woman L.

<sup>68</sup> [...]: Cominar L.



IBF = Ibn al-Bayṭār, *Traité des simples*, Traduction de Lucien Leclerc, 3 vols. Paris 1877-1883.

ID = Issa, A., *Dictionnaire des noms des plantes en Latin, français, anglais et arabe*, Cairo 1930.

IS = Ibn Sīnā, K. *al-Qānūn fī l-ḥbb*, bk. II, Bulāq 1877.

KIN = *The Medical Formulary or Aqrābādhīn of al-Kindī*. Translated with a study of its Materia Medica by Martin Levey. Madison, Milwaukee and London 1966.

M = Rosner, F., *Moses Maimonides' Glossary of Drug Names. Translated and annotated from Max Meyerhof's French edition (Maimonides' Medical Writings 7)*, Haifa 1995.

ML = Guido Mensching, *La Sinonima delos nombres delas medecinas griegos e latynos e arauigos*, Madrid 1994.

MS = Meyerhof-Sobhy, *The abridged version of "The Book of Simple Drugs" of Aḥmad ibn Muḥammad al-Ghāfiqī by Gregorius Abu -l-Faraj (Bar Hebraeus)*, vol. 1, fasc. 1: letter alif, Cairo 1932.

RAM = Meyerhof, Max (ed.), *Maimonide, Sharḥ asmā' al-'uqqār, un glossaire de matière médicale composé par Maïmonide*, Cairo 1940.

RS = Ruska, J., *Das Steinbuch des Aristoteles. Mit literargeschichtlichen Untersuchungen nach der arabischen Handschrift der Bibliothèque Nationale herausgegeben und übersetzt*, Heidelberg 1912.

SP = Schmucker, W., *Die pflanzliche und mineralische Materia Medica im Firdaus al-Ḥikma des 'Alī ibn Sahl Rabban aṭ-Ṭabarī (Inaugural-Dissertation)*, Bonn 1969.

Vullers = Vullers I.A., *Lexicon Persico-Latinum Etymologicum*, 2 vols., Bonn 1855-1964, repr. Graz 1962.

WKAS = *Wörterbuch der klassischen arabischen Sprache*. Hrsg. durch die Deutsche Morgenländische Gesellschaft. In Verbindung mit A. Spitaler bearb. v. Jörg Krämer u. Helmut Gätje (ab Lief. 3 bearb. von M. Ullmann), Wiesbaden 1957ff.

### Passage-by-passage commentary

{1-2} As we remarked in the introduction, our treatise, including Ḥunayn's introduction, is cited by Ibn Abī Uṣaybi'a at the end of his entry on Galen (ed. August Müller, reprinted Beirut, 1981, part 1, p. 154), where he lists the many tracts spuriously attributed to the great Hellenistic physician. There are not a few variants between MS Sassoon and the citation in Ibn Abī Uṣaybi'a. In most cases, but not all, these can be readily accounted for

as misreadings on the part of the copyist of MS Sassoon, or misreadings already present in the text that he received. We shall display here our own English translation of the title and introduction found in Ibn Abī Uṣaybi‘a, after which we shall comment upon a few of the more significant variants.

“On hidden drugs which he [merely] alluded to and hinted at in his [other] writings, one book (*maqāla*). Said Ḥunayn ibn Isḥāq: The aim of Galen in this book is to describe that which he gathered in the course of his life concerning drugs having nimble (*khafīfa*) special properties. He experimented with them many times, and they proved to be correct. He hid them from most people, by withholding it from them. Only people of distinction, those possessing understanding and discernment, from among the people of the art, were able to become appraised of them. Someone else [also] commented on this book, but he misread (*ṣahḥafa*) it, adding to it things that don't belong, and omitting from it that whose import he did not understand. I applied myself to it, exerting myself as far as possible, and in view of my ability. I compared it with the experiences that I had accumulated. I explicated it in Arabic [i.e., translated and commented], for Abī Ja‘far Muḥammad ibn Mūsā.”

The significant differences between the two versions are as follows:

i. The title in Ibn Abī Uṣaybi‘a seems to indicate that “Galen” alluded to these substances in his [other] writings (*fī kutubihī*). This is apparently not the reading of MS Sassoon, though one cannot be sure, due to the poor state of the manuscript. Nonetheless, the hints and allusions, by way of code-names, are found in our text alone, even though Galen refers to some of the very same substances by their scientific nomenclature in his other writings.

ii. According to the title in Ibn Abī Uṣaybi‘a, the special properties (*khawāṣṣ*) of the simples are *khafīfa*, “nimble”; the word more usually means “slight”, “insignificant”, but that meaning seems unwarranted in the present context. The adjective found in MS Sassoon, *‘ajība*, “wondrous”, seems much more appropriate for a work of this sort.

iii. The description of the intended audience for the treatise is much briefer in Ibn Abī Uṣaybi'a. In particular, his version adds that it was intended for “the people of the art” (*'ahl 'l-ṣinā'a*).

iv. The introduction in Ibn Abī Uṣaybi'a makes no mention of Ḥunayn's consulting a number of Greek versions.

{3} Note that the species of tamarisk known to the Arabs as *al-athl al-rīḥī* (*Tamarix articulata*) was unknown to the Greeks; the tamarisk known to them was *Tamarix gallica* L., which is called in Arabic *shajarat 'l-ṭarfā*.

{4} RAM: *al-athl* is the tamarisk (#9); moreover, our description of the fruit as *al-rīḥī* (meaning the same as *al-rayḥānī* bears some similarity to Maimonides' statement that the people of Egypt call the oriental tamarisk *al-'adhba*, “savory”. However, *al-fāwāniyā* is a different plant, namely “peony”, known also as *'ūd al-ṣalīb* (“wood of the cross”), still used (or at least until very recently) as a remedy in Egypt and Syria (#304). Ḥunayn adds here the Persian name as well, *kahyānā* (Persian, cf. Vullers 2: 929), following MS 275, misspelled in the manuscript as *kahnaya*. Ḥunayn's reference to Galen's claim concerning the efficacy of hanging peony around the neck of the epileptic must be to *On Simples (Peri Kraseos...ton haplon farmakon* 6, 10, ed. Kuhn 11: 859-860), where one encounters the same story of the epileptic who was cured by this method, relapsed when the necklace was removed, and then cured again when the necklace was restored. Galen's endorsement of this seemingly superstitious cure was well-known; for example, Moses Maimonides appears to allude to it in his *Guide of the Perplexed*, 3.37 (trans. S. Pines, Chicago, 1964, vol. 2, p. 544). Significantly, in our text Ḥunayn displays as well the Greek term for epilepsy (see note 5 to the introduction); this transcription of the Greek term is missing from the Arabic version of *On Simples* (MS Firenze Or. 193, ff. 116a-b). This indicates to us that the author of the commentary is the historical Ḥunayn, who certainly read Greek texts, and who would not have been dependent upon the Arabic versions of Galen.

{5} In a fragment preserved by al-Rāzī, Rufus recommends as a remedy for an epileptic child to rub his body with peony pulverized and mixed with rose oil (cf. Daremberg-Ruelle, *Fragments*, no. 133, in *Oeuvres de Rufus d'Éphèse*, Paris 1879); for other kinds of treatment of epileptics by Rufus see his “*Krankenjournal*” (ed. M. Ullmann, Wiesbaden, 1978, pp. 98-104). For the treatise on epilepsy allegedly composed by Rufus, see A.

Sideras, *Rufus von Ephesos und sein Werk im Rahmen der antiken Medizin* (ANRW 37.2). Hrsg. von W. Haase, Berlin, 1994, p. 1101, n. 168.

{6} The term we translate “scaly rash” is *qawābī*; plural of *qawaba*; cf D 2: 416, “dartre”; D. Sontheimer, “Nachricht von einer arabisch-medicinischen Handschrift, vermutlich des Ibn-Dschezla,” *Janus* 2 (1847): 246-272, repr. in: *Beiträge zur Geschichte der arabisch-islamischen Medizin. Aufsätze I* (1819-1869), hrsg. von F. Sezgin, in Zusammenarbeit mit M. Amawi, D. Bischoff, E. Neubauer, Frankfurt am Main 1987, p. 97: “Fischschuppenaussatz. Ichtyosis”; A.Z. Iskandar (ed. and trans.), *Galen. On Examinations by which the Best Physicians are Recognized*. Berlin 1988, p. 123, l. 10, “eczema”.

{7} **RAM**: this is acacia, usually called *sant* (see 38, 39), but also known as *umm ghaylān* (#278); its identity is problematic; cf. DT 3:20, and especially Meyerhof’s discourse in MS 95. Concerning the association of this thorn with the Hijaz, cf. DT 1: 20, it is also called: *shawk al-Ḥijāz*.

{8,9} The Arabic version of Galen’s *On Simples*, MS Firenze Or. 193, f. 144a, discusses various appellations for this plant in Arabic and Syriac. However, here as elsewhere, there is no mention at all of the code name (“the plant that grows between graves”) employed here by “Galen”. It is not clear whether “Galen” means to say that harmel grows wild between graves, or that it is deliberately planted in cemeteries, as was the custom with certain plants in the Middle East. In any event, harmel is not among the plants recorded by A. Dafni et al., “Ritual Plants of Muslim Graveyards in northern Israel,” *Journal of Ethnobiology and Ethnomedicine* 2 (2006), 2-38.

{11} “Cistus”; according to Ibn al-Bayṭār (IBF 2014), the plant mentioned by Dioscorides and Galen as “Tragopogon” and translated by Ḥunayn as *lihyat at-tays* is not “goatsbeard” but the plant called “Cistus”; see also DT 1:66. Broom-rape was also identified with “goatsbeard”; cf. DT 1: 66, and M 174.

{14} “Marsh-nut” (*Semecarpus anacardium*); cf. SP 137; Gerrit Bos, “Baladhur (Marking-nut): A popular medieval drug for strengthening memory”, *Bulletin of the School of Oriental and African Studies*, LIX, 2, 1996: 229-236.

{17} For the tradition that the balsam-tree dies when cut [with an iron instrument], cf. Flavius Josephus (Ant. Jud. 14:4), Tacitus (Hist. 5:5), and Pliny, Hist. Nat. 12:115.

{19} *'Adhb* ('*adhba*) refers just like *kazmāzak* (see {21}) to the gall-nut of the tamarisk and not to the fruit, as the Arabs assert; cf. DT 1:58, n.2; IBF 1523.

{21} *Kazmāzak*, a Persian word, refers to the gall-nut of the tamarisk and not the fruit, as noted above.

{25} *Xilocarapte* is probably a corruption of *xilocaracta* from Greek ξυλοκέρατα which is *Ceretonia siliqua* L (cf. Liddell, H.G. and R. Scott, *A Greek English Lexicon*. Revised and augmented throughout by H.S. Jones a.o. With a supplement 1968, repr. Oxford 1989, p. 1191, s.v. ξυλοκέρατον); cf. ML 218.

{23} פִּיגְנֻכְשָׁה, read: פִּגְנֻכְשָׁה (*fanjankusht*); cf. DT 1: 72. A synonym of *fanjankusht* is *shajaratu Ibrāhīm* (cf. DT 1: 72, esp. n. 6), and instead of this last term one sometimes finds *shajaratu Maryam* (cf. D 1: 729), although the latter is actually a synonym of *uqḥuwān*, “feverfew” (*Chrysanthemum Parthenium* Pers.); cf. DT 3: 130.

{30, 31} On the connection between vineyards and black nightshade, see the online report <[www.weedbiology.uckac.edu/Research-4.htm](http://www.weedbiology.uckac.edu/Research-4.htm)>.

{35} **KIN**, 246; see also MS Firenze Or. 193, f. 160b, for the entry on *banj*.

{38, 39} Lane's dictionary defines *sant* as “mimosia Nilotica, acacia Nilotica”, but *dulb* as some kind of tree, without naming the species; see also MS Firenze Or. 193, f. 149b. According to the Wikipedia entry on acacia, a species of moth, *Bucculatrix flexuosa*, “feeds exclusively on *Acacia nilotica*.” The same entry also discusses the pharmaceutical uses of acacia.

{41} “clover (lesser) dodder” (*ukshūth* = *kashūth*); for this parasitic plant cf. DT 4: 169; WKAS 1: 204-205; IBF 1940.

{43} the Arabic term SQṬ for this tree the fruit of which was used for making bird lime (*dibq*) (cf. IBF 848) could not be deciphered. The tree in question is possibly the mistletoe (*Loranthus europaeus* (Jasq.)) (cf. DT 3: 84; IBF 848).

{44} Indian almond; according to ID 180: 11, it is the chocolate nut, *Theobroma L.*

{45} If the correct reading in MS Sassoon is “Indian nut” (*jawz hindī*), then the intended simple is the coconut, or the fruit of the palm-tree, *Cocos nucifera L.*, also known as *nārjīl*; cf. M 257. The Latin here has a more coherent version of the mangled text displayed in MS Sassoon: *et vocatur in lingua Arabica Asel: sel est fructus interior mali granati, et exterior pars mali granati vocatur Bel: in Avicenna reperies, ut dicit Iudeus.* (“It is called in the Arabic language *athl*. Sel is the inner fruit of the Indian pomegranate, whereas the outer part of the pomegranate is called Bel. This is revealed in Avicenna, so said the Jew.”) As we have seen above, *'athl* is the Arabic word for tamarisk. IS, 271, does have an entry for *bull*, the beginning of which reads, “al-Hindī said that it is the Indian cucumber (*qiththā*)”. Thorndike, in his chart of the simples found in *De plantis*, (p. 91 of the article, item 21), gives “Humaym”’s clarification here simply as “sel et bel”. For the Latin sel (=shull) and bel (=bull), cf. DT 4: 163; M 57.

{51} “Convey the written message”: literally, “speak the writing”. IS, 464, mentions the use of papyrus ash for cosmetic purposes. As noted in the introduction, L here adds a remark from Abraham, based on hearsay or perhaps first-hand knowledge, from the practice of the druggists in Alexandria.

{53} The “gold plant”, cf. D 1: 729, s.v. *shajar al-yusr*: “l’arbre d’opulence”: *al-musammā shajar adh-dhahab*. Just possibly, this may be a type of stonecrop (a k.a. “golden moss”), one of the Crassalaceae.

{56, 57} Regulated: *yudabbar*. We take this to mean, that it is lethal if it is not administered properly. “For all ailments of the stomach due to phlegm descending from the head”: The rather cumbersome sentence says literally, “for all that happens in the stomach of ailments of phlegm, and it descends from the head.”

{57} *Dandas* is possibly a corruption of *dand*, i.e. croton (*Croton tiglium* L.), a drastic purgative; cf. M. 97; IBF 885; IS, 294; BAY, 149-3. However, not all of these sources claim that *dand* is poisonous. According to the Latin reading *condisi*, it is hellebore, cf. DN no. 191; ML p. 92, l.4, Arabic *kharbaq*.

{60} [plant]: the text has אֵלֶשׁ which is almost certainly a shorthand or error for אֵלֶשְׂגֶרֶה, i.e. “plant” or “tree”; this emerges clearly from the commentary of Ḥunayn in the following passage.

{61} BAY, 291, referring to Galen, *On Simples*, book seven.

{62, 63} This is an important remark. Ḥunayn explains here that Galen's “secrecy” in this tract consists in his employment of code-names for plants that are in fact rather well-known. It is still not clear, however, why Galen felt that this information had to be couched in this manner. Galen mentions the two kinds of indigo and their properties in *On Simples* 6:9 (K11: 890-1).

{64, 65} See Lane, s.v., citing a poem describing the shaking of this bird when they have been much-wetted by the rain. Gershon ben Solomon, *The Gate of Heaven* (trans. F.S. Bodenheimer, Jerusalem, 1953), p. 210, relays the story that the quail crosses the sea in order “to stay away for all of winter”.

{67} The stone which eases birth: For this stone also known as the “aetites” or “eaglestone”, cf. RS, p. 18 (introduction), p. 114, no. 31 (Arabic text), p. 165 (German translation); IBF no. 130. The birthstone or hyacinth, to which men are guided by eagles, is mentioned by Epiphanius (Lynn Thorndike, *History of Magic and Experimental Science*, vol. 1, New York, 1923, p. 496). This item is already mentioned by Pliny (N.H. 36, 39, 149-151). Its identity, however, is uncertain; according to T.G.H. Drake, “The eagle stone, an antique obstetrical amulet”; *Bulletin of the History of Medicine*, 8 (1940): 128-130, p. 128, referring to T.J. Pettigrew, *On superstitions connected with the history and practice of medicine*, London, 1844, it is “a composition of the oxyde of iron with small portions of silex and alumina, which rattle within upon being shook...”; D. Wyckoff, Albertus Magnus. *Book of Minerals*. Oxford 1967, remarks that it is “a hollow geode or concretion containing loose crystals, pebbles, or earth”.

{69} KIN, 265-266, no. 96, *dār Ṣīnī*.

{70} This recipe is not part of our treatise, but it seems to have been considered to belong to it by the copyist. For Ṭabarzad sugar, see KIN, 284, where it is noted that Ṭabarzad is the finest sort of sugar. One dram is 3, 125 grams; cf. Hinz, W., *Islamische Masse und Gewichte ungerechnet ins metrische System* (Handbuch der Orientalistik I, Ergänzungs-band I, 1). Photomechanischer Nachdruck mit Zusätzen und Berichtigungen, Leiden-Cologne, E.J. Brill, 1970, p. 3.

#### IV. Text<sup>69</sup>

{1} [275] >אלאדויה אלמכתומה אלתי כנא (?)<sup>70</sup> ענהא גאלנוס ען אלאיצ'אה בהא ורמזהא ממא כ'ברה ו [...]<<sup>71</sup> תפסיר חנין אבן אצחאק .

{2} קאל חנין ג'רץ' [276] גאלינוס פי הדא אלכתאב הו אן יצף במא גמעא פי טול עמרה מן אלאדווייה אלעגיבה אלכ'ואץ וגרבהא מראר כת'ירה פלם יכ'ט אלתגרבה פיהא וכתמהא ען אכת'ר אלנאס כנא<sup>72</sup> בהא עליהם ואן לא יטלע עליהא אלא אלכ'ואץ מן ד'וי אלאלבאב ואלתמיז ואלעקול ולם יפצח בהא לגמלה אלנאס פד'כרהם לד'וי אלעקול ואלמערפה ולמן פיה אלנהויץ' בעלמהא <ורפעת אלי גיר נסכ'ה><sup>73</sup> פגמעת מנהא מא כאן צחיחא קד גרבתה וכל'ברתה ועאלגת בה לאן קד כאן ג'ירי פסר הדי אלכתאב פלם יפהם אסתד'ה פצ'עף וזאד פיה מא ליס מנה ונקץ מנה מא ליס יפהם תקדירה. פלמא סאלת פי תפסיר הדי' אלכתאב עמדת אלי ד'אלך ואג' תהדת<sup>74</sup> פיה בחסב אלאמכאן ואלטאקה וקאבלת בעדה נסכ'א יונאנייה אגתמעת ענהי ופסרתהא באלערבי לאבי געפר אבן מחמד אבן מוסי.

{3} תפסיר אלעקאקיר ואלאדווייה וכל'ואצ'הא והי [מ]ן באבא עקארא. קאל גאלנוס אלשגרה אלדי' יקאל להא <אלאת'ל אלריחי><sup>75</sup> תנפע מן אלצרע ואלאג'מא אד'י עלקת עלי

<sup>69</sup> Symbols: [...] = blank space in MS Sassoon; L = Pseudo Galen, ed. Junta, Venice 1565; <...> = sequences of more than one word the Latin version of which is given in footnote.

<sup>70</sup> The editors prefer to read כנא as in Ibn Abī 'Uṣaybi'a rather than כנ'א as it appears in the manuscript. See also note 71 below.

<sup>71</sup> Quas noluit propalare, nec consignare in libris suis alijs: quae sunt experimentatae, et probate L.

<sup>72</sup> Editors' emendation; MS נ 'צ.

<sup>73</sup> Et venit ad meam notitiam non translatio una L.

<sup>74</sup> Add. MS ופסרתהא באלערבי - . ואג' תהדת.

<sup>75</sup> Alatelis zinzi nomine loci L.



אלאנסאן לם יעאודה אלצרע אצלא והי איצ'א נאפעה מן אלסמום אלקאתלה ולד'ע אלהואם אד'י שרב מנה אלמלדוג 'ומן סקי סמא .

{4} קאל חנין אנמי ענא גאלינוס בקולה אלאת'ל אלריחיזי הו עוד יקאל לה אלפואניא >לאן הדי אלעוד (?) אלגייד מנה אלצלב כיף [...] (?) וגדת פיה צליבא כאלצליב אלמוגוד פי עוד אלאת'ל<sup>76</sup> ג'יר אן אלפואניא אסוד אלעוד אסוס אללון פמן אגל ד'לך סמאה אלאת'ל אלריחיזי. הדי אלעוד אעני אלפואניא יקאל לה איצ'א אלכהיאנא<sup>77</sup> וזעם גאלינוס אן הדי אלעוד אן עלק עלא מן בה אלא אלמסמא אבלימוס<sup>78</sup> והו דא אלצרע נפע וצפתה אנה שדיד אלראיחה אסוד (?) אללון אעני צ'אהרה פאמי באטנה פאנה אביץ' ואגודה אלצליבי וד'כר גאלנוס אנה אתי במן בה אלצרע פעלקה עליה פזאל (?) אלצרע וצ'ן אנה קד עופי פנועוה ענה פעאודה אלצרע פאמר בתעליקה עליה פזאל ענה אלצרע פעאוד ונועה פעאודה ד'אלך .

{5} קאל חנין [277] וקד גרבתה אנה מרארא פוגדתה צחיחה כמי ד'כר גאלינוס ולרופס מקאלה פיה מפרדה .

{6} קאל גאלינוס אלשגרה אלתי תחיץ' דמא חיצ'הא נאפע לוגע אלמעדה ואלארחאם ואלריאח אלג'ליצה אלתי תכ<ון >מנהא וינפע אלקואבי .

{7} קאל חנין אנמי ענא בקולה אלשגרה אלתי תחיץ' דמא הי שגרה אם ג'ילאן והי שגרה כת'ירה אלשוך ושוכהא אכבר מן שוך אלעוסג והי תנבת כת'יר בטריק אלחגאז ולהא ורד מדאר אלרוס מגתמע ג'יר מפתרק וורדה סאק דקיק כסאק אלבנפסג אלא אנהא<sup>79</sup> אצג'ר טול מנה >ולה ראיחה טייבה כ'מרה עגיבה עבקה כשסריס ורדהא<sup>80</sup> ויעמל מן ורדהא ד'ראיר ענד אלעטארין באלעראק ולהא צמג'ה חמרא תסמא [...] <sup>81</sup> והו חיצ'הא ורב מא גרא עלי סאק אלשגרה שי כת'יר ירא כאלדם .

{8} קאל גאלינוס אלשגרה אלתי תנבת בין אלמקאבר תנפע מן אוגאע אלמפאצל ואלריאח אלבארדה ועסר אלולאדה וריאח אלארחאם ווגע אלסאנאן ואלנקרס אלעתיק .

{9} קאל חנין אנמי ענא בד'אלך שגרה אלחרמל והו יקע פי כת'יר מן אלמעגונאת ואלחבוב .

{10} קאל גאלינוס אלשגרה אלתי יעתלף בזרהא וחבהא אלחמאם אלברי >יעני אלעיל ולהא ורק יקטע<sup>82</sup> אדם וילחם אלגראחאת מן סאעתהא ולא יחתאג מעהא אלי דוא פי ד'אלך אצלא ותשד אלעצ'א אלמסתרכייה ותנפע מן אלסמום אלקאתלה .

<sup>76</sup> Quod sicut planta eius quae bona una est, quacunque forma frangatur, crux interius reperitur, sic crux quae reperitur in planta Alatel L.

<sup>77</sup> Editors' emendation; MS אלכהיאנא.

<sup>78</sup> אבלימוס or אבלימוס read אבלימוס.

<sup>79</sup> Editors' emendation; MS מנהא.

<sup>80</sup> Et habet odorem odiferum vinosum et mirabilem odoratus huius rosae de longe L.

<sup>81</sup> [...]: adendam L.

<sup>82</sup> Et caret foliis. Restrinxit fluxum sanguinis L.

{11} קאל חנין אנמי ענע בקולה אלשגרה אלתי יעתלפהא אלחמאם אלברי בורהא וחבהא יעני לחיה אלתיס והד'ה אלח[ש]ישה <מוסמא קישטוש><sup>83</sup> <ואצלחהא אלטראת'ית><sup>84</sup> ואד'י אדק אל [ט] ראת'ית' וטרח פי אלספוף נפע מן אלאכתלאף וקטע אלאסהאל ואלדם.

{12} קאל גאלינוס אלשגרה אלתי אד'י כ'צ'בת בהא אליד מע אלחנא קטעת אלחיץ' ונפעת מן לד'ע אלהואם אלקאתלה <ותפתח אלסדד ותד'יב אלטחאל><sup>85</sup> ותגלו אלבצר .

{13} קאל חנין אנמי הי אלגנטיאנא.

{14} קאל גאלינוס אלשגרה אלתי תנבת פי אלהנד לא יקרבהא אלכ'נאפס ותויד פי אלחפיץ' ותקוי אלה'ן ואלעצב ותחסן אללון ותויד פי אלבאה ושדה אלנעאץ' אד'י טלי בה אלקציב .

{15} אל חנין הי אלבלאדר וד'אלך אן [278] אלכ'נאפס אד'י קרבן (!) מן הד'ה אלשגרה מתן גמיעא ועסלהא אד'י ט'לא בה אלקציב שדדה וזאד פי קוורתה ונעאצ'ה וכא'צייתה תצפית אלה'ן.<sup>86</sup>

{16} אל גאלינוס אלשגרה אלתי תשרט <קבל קלעהא><sup>87</sup> ינפע עודהא וחבהא וממא יכ'רג מנהא מן אלסמום אלקאתלה ולד'ע אלהואם ווגע אלאד'ן ואלצרע ותג'לב אלפצ'ול מן אלאס.

{17} קאל חנין הו אלבלסאן וד'אלך אנהא תשרט והי חבה תסתכ'רג מנהא דהנהא פאד'י שרטת וכ'רג מנהא דהנהא מאתת.

{18} קאל גאלינוס אלשגרה אלטוילה אלתי תנבת עלא שאט אלאנהאר תקלע אלה'ואליל וינפע מן חמא ארבע ואלמת'לת'ה ופתח אלסדד.

{19} קאל חנין <הי שגרת אלעדב><sup>88</sup> .

{20} קאל גאלינוס אלשגרה אלתי ינפע בהא אלצבאג'ין תנפע מן אלגדרי ואלורם אלארצאצי ויקוי אלמעדה ואללת'ה ותחבס אלטביעה ויצ'מד בהא אלאעצ'א אלמסתרכ'ייה ותנפע לאנקלאב מקאעד אלצביאן.

{21} קאל חנין הי שגרת אלגזמאזג והי ת'מר אלאת'ל.

<sup>83</sup> Editors' emendation; MS שטושמוק. Et in graeca lingua appellatur Ciosatos L.

<sup>84</sup> Et eius radix (= אצלהא) appellatur in Arabico Carapit L.

<sup>85</sup> Et aperit oppilationes, et specialiter splenis L.

<sup>86</sup> Semen L.

<sup>87</sup> Om. L.

<sup>88</sup> Intelligit Galenus, dum dixit arbor longa etc. est arbor salicis. Si ex salice fiat aqua sublimata, et detur quartanario, eius elongat accessionem paroxysmi: probatum est L.

{22} קאל גאלינוס אלשגרה אלתי תנבת פי בטון אלאודייה ולא תך' פי צפחתי אלואדי תקטע אלבאה ותיבס אלמני ותקוי אלצ'הר ותחד אלבצר ותד'הב באסתר'כ'א אלעצ'א.

{23} קאל חנין אנמי ענא שגרה אלפיגן כשת וקד יקאל להא שגרת מרים וחבהא כחב אלבאד'נגאן.

{24} קאל גאלינוס אלשגרה אלמנתנה אלאיחה אלד'י ישה חמלהא באלוביא אד'י אבתלעת אלאמרה מן חבהא חבה צחיחה לם תחמל סנה <וכד'אלך כל חבה לסנה><sup>89</sup>.

{25} קאל חנין אנמי ענא בשגרה אלמנתנא (?) ויסמא [...] <sup>90</sup>.

{26} קאל גאלינוס אלשגרה אלתי פי וסטהא ערגון כערגון אלמוז יקתל אלדוד ואלדואב ומן אכתחל בחבה מן חבהא נפעה מן ארמד ואלעמש ותנפע מן אלצדאע פי שק אלארס ואלעין ויד'הב באלדמעה.

{27} קאל חנין ענא שגרת אלכ'רבק אלאביץ'.

{28} קאל גאלינוס <אלשגרה אלתי פיהא שבה אלאת'ל><sup>91</sup> אד'י אכ'ד אלאכ'ד מן חבהא ג' חבאת <פגעלהן [...] ><sup>92</sup> כאן וציהא ענד אלנסואן<sup>93</sup> מטאעא פיהן וחב הד'ה אלשגרה ינפע מן אלצרע ואלתכ'ייל.

{29} קאל חנין אנמי ענא [279] שגרה <אלע [...] ><sup>94</sup> יסמא באלרומייה<sup>95</sup> [...] <sup>96</sup> ויסמי <ענב אלת'עלב><sup>97</sup>.

{30} קאל גאלינוס אלשגרה אלתי תנבת בין אלכרם אלמרבעה אלעוד אד'י אדק ורקאה ועגן בכ'ל וסקי צאחב [...] <sup>98</sup> אבראה ומן שרב מן מא עצירה לם יכאד יסכר מן אלשראב ואן שרבת מן מא הד'ה אלשגרה אמראה חאמל אסקטת אלגנין.

{31} קאל חנין אנמי עני שגרה ענב אלת'עלב.

<sup>89</sup> Et si plus capit, tot annorum differtur impregnatio quot granorum facit captionem L.

<sup>90</sup> [...]: planta Xilocarapte L.

<sup>91</sup> Cum qua curantur iumenta L.

<sup>92</sup> Et ligat in aliqua ligatia L.

<sup>93</sup> Hominem L.

<sup>94</sup> Aratir L.

<sup>95</sup> Lingua romana L.

<sup>96</sup> [...]: Ymbralicas L.

<sup>97</sup> Grana iuniperi L.

<sup>98</sup> [...]: Tenasmonem L.

{32} קאל גאלינוס אלשגרה אלתי תנבת פי ארבאין' אלמדן אד'י עלק מנהא עלי מצ'רוע ברי מן צ'רעה פאד'י בכ'ר בהא וקת צרעה קאם מן צרעה. ואד'י טבכ'ת באלטלי ואלעסל וסקת מן עסר אלבול ווגע אלכ'אצדה ברי אלעליל.

{33} קאל חנין יעני אלשגרה [...] <sup>99</sup> ותסמא <באלרומייה [...] >.<sup>100</sup>

{34} קאל גאלינוס אלשגרה אלתי אד'י וקע עליהא אלעצאפיר אלד'כראן יסקטן אמואתא תנפע מן לד'ע אלהואם ומן אלריאח אלבארדה ומן אלאוראם אלצלבה ותחלל אלנקרס ותזיד פי אלבאה ותקוי אלאנעאין ' ואד'י טבכ'ר בהא אד'הבת חמא אלארבע.

{35} קאל חנין >יעני שגרה אלבנג ודואניהא <<sup>101</sup> והו צנף מן אלבנג יסמא באלפארסייה [...] ><sup>102</sup> והי שגרה הנדייה.

{36} קאל גאלנוס אלשגרה אלד'י אד'י ראתהא אלחאמל אסקטת ומאת אלגנין פי גופהא.

{37} >קאל חנין יעני שגרה אלעדראוון (?) ותסמא באלערבייה קאתל אביה <.<sup>103</sup>

{38} קאל גאלינוס אלשגרה אלתי אד'י אכל<sup>104</sup> אלפראש והו אלוטואט מן ורקאה ושם ראיחתהא מתן מן סאעתהן נאפעה מן אלאוראם אלחארה ורמאדהא נאפע מן אלקרוח אלעפנה.

{39} קאל חנין >אנמי ענא שגרה אלדלב <<sup>105</sup> >ויסמי אלסנט <.<sup>106</sup>

{40} קאל גאלינוס אלשגרה אלתי יקאל להא אלנעלה<sup>107</sup> תפתח אלסדד ותד'הב אלפצ'ול ותנפע מן חמא [אלרבע] <sup>108</sup> ואלאוראם [אלצ? לבה, <sup>109</sup>.

{41} קאל חנין אנמי ענא שגרה אלאכשות ואנמי סמת בהד'י אלאסם לאנה לא א[צל להא וכאן להא ע]רוק תלתוי אלשגר בלא אצל.

<sup>99</sup> [...]: Yringnis L.

<sup>100</sup> Lingua romana Archanus L.

<sup>101</sup> Intelligit Galenus de arbore, quae est Albeam in lingua Graeca vocatur Dorsogiara L.

<sup>102</sup> [...]: Alsmear L.

<sup>103</sup> Dixit Hunain, Intelligit Galenus de planta in lingua Arabica appellata occidens patrem: et significat in graeca Aconiton: et dicit Iudeus quod eam vocamus herbam Lupanarium L.

<sup>104</sup> מנהא: the MS adds אכל.

<sup>105</sup> Intelligit Galenus de arbore Fusteci L.

<sup>106</sup> Dicit Iudeus quod est lignum glaucum, quo tingunt tinctoros L.

<sup>107</sup> Portulaca agrestis L.

<sup>108</sup> Quartanae L.

<sup>109</sup> Calidis L.

{42} קאל גאלינוס אלשגרה [...] <sup>110</sup> יקאל להא [...] <sup>111</sup> תחלל אלאוראם ותגפף אלקרוח ותנפע מן וגע אל[נדאן] <sup>112</sup> ותזיד פי אלבאה ותקוי אלאעצ'א.

{43} קאל חנין אנמי יעני שגרה [...] <sup>113</sup> [280] >ויקאל להא אלסקט <<sup>114</sup> ואנמא סמת בהד'י אלאסם לאן תמאר הד'ה ינצ'גהא [ פי דאכ'לה ת'ם אד'י לטך' פיה גדאר או שגרה או עוד לם יקף בה טאיר אלא תדבק בה ואלציאדין יסתעמלונה כת'ירא.

{44} קאל גאלינוס אלשגרה אלתי יקאל להא אללוז אלהנדי תזיד פי קווה אלאעצ'א ואלבאה ואלחפץ' ותקוי אלעצב ותנפע אלדמאג'.

{45} קאל חנין אנמי עני שגרה תנבת פי אלהנד יקאל להא <גוז הנדי (?) ><sup>115</sup> הו דאכ'ל אלרמאנה אלהנדייה כ'ארגהא.

{46} קאל גאלינוס אלשגרה אלד'י יקאל להא אלפתק תנשף אלרטובה ותנפע מן אלאוראם אלחאדת'ה ואנמי סמית שגרה אלפתק לאנהא אד'י אדקת ווצ'ע'ת עלי אלפתק אלד'י יך' עלי אספל אלארכיתין אלחמת אלפתק ונפעת מנה.

{47} קאל חנין אנמי ענא שגרה [...] <sup>116</sup>.

{48} קאל גאלינוס אלשגרה אלתי יקאל להא אלחמלה אלקוה אלעצ'מא תנפע מן אלאוראם אלחארה ותחבס אלבטן אלמסתלק ותקטע מאדת אלצפרא ותסתעמל פי עאמה אלאטעמה.

{49} קאל חנין אנמי עני אלשגרה אלתי יקאל להא אלכסברה אלרטבה.

{50} קאל גאלינוס אלשגרה אלתי יקאל להא אללסאן אלנאטק ואלאמר אלנאפד' אד'י אהרקת וד'רת עלי אלמוצ'ע אלד'י יסיל מנה אלדם חבסתה ותנפע אלאכלה אלתי פי אלנאסאן ותגפף אלקרוח ותחבס דם אלחיץ' אד'י אחתמל.

{51} קאל חנין אנמי ענא שגרה אלברדי אלתי תעמל מנהא אלקראטיס ואלקראטיס אד'י אהרק פעל מת'ל ד'לך תלך אלשגרה וינפע מן אלעלל אלתי ד'כרהא <sup>117</sup> ד'סרהא ואנמי סמאהא בהד'י אלאסם > לאן אלקרטאס יכ'אטב אלכתאב מן בעד אלמסאפה. <sup>118</sup>

<sup>110</sup> [...]: quae quando aves super eam sedent, adherent ita quod elevari non possunt L.

<sup>111</sup> [...]: Digil L.

<sup>112</sup> Aurium L.

<sup>113</sup> [...]: Visci L.

<sup>114</sup> Et vocatur lingus graeca Aliscat L.

<sup>115</sup> Asel L.

<sup>116</sup> [...]: quae vocatur nux Cupressi L.

<sup>117</sup> Editors' emendation; MS ד'סרהא.

<sup>118</sup> Quia per papirum loquimur, et verba transmittimus, scilicet in epistolis L.

{52} קאל גאלינוס אלשגרה אלתי יקאל להא שגרה אלחיץ' תנפע מן אחתבאס אלבול ולדג' אלהואן] ומן ערק אלנסא ואלדם אלזאיד (?)<sup>119</sup> פי אלמת'אנה.

{53} קאל חנין אנמי עני אלשגרה [...] <sup>120</sup> >והי תסמא באלערבייה שגרה אלד'הב [...] <<sup>121</sup> ואנמי סמת שגרה אלחיץ' לאן ורקאה אד'י אדק (?) <sup>122</sup> ואחתמלת [...] אלמפרט ב [...] מן סאעתהא.

{54} קאל גאלינוס אלשגרה > [...] אלעיין <<sup>123</sup> תנפע מן וג'ע אלסנאן ותג'פף אלקרוח ותקטע אלפצ'ול <ותנב [ת] [...] ולה לטאפה עגיבה>.<sup>124</sup>

{55} קאל חנין אנמי עני שגרה אלמאמיראן לאן [281] פיהא קווה לעלאג אלעיין וכ'אצה אד'י דקת וחדהא באלכחל אד'הבת כל עלה תך' מן אלגרוב ות'קל וריח ואשבאה ד'אלך.

{56} קאל גאלינוס אלשגרה אלתי תסמא סראג אלצ'לאם והי מן אלדווייה אלקאתלה אד'י לם ידבר בשרבהא והו מן אלדויה [...] <sup>125</sup> ולא ידאוי בהא אלא >מן כאן בעיד מן אלטבא <<sup>126</sup> נאפץ' <sup>127</sup> לגמיע מא כאן פי אלמעדה מן צ'רר אלבלג'ם ויחט מן אלראס פאד'י סקאהא (?) אלד'י ליס יחסן סקיהא ולא יקום באלעמל בהא קתלת אד'י שרבת ותדר אלבול ואלחיץ' אד'י אכ'ד 'מנהא בקדר.

{57} קאל חנין אנמי ענא >שגרה אלדנדס (?) <<sup>128</sup> לאן שגרהא יצ'י פי אללילה אלצ'למא פאד'א ראהא אלמסאפריין ואלס'יאה לם ישכו אנהא סראג פאד'י קרבו מנהא לם ירו שיא.

{58} קאל גאלינוס אלשגרה אלתי תסמא כ'דאעה אררגאל נאפעה מן כ'פקאן אלקלב ותקוי אלדמאג' ותנפע מן אלצ'רע ואללקוה ואלאמראץ' אלעתיקה אד'י כ'לטת מע אלדויה אלתי תעדלהא פאן אכ'דת וחדהא פאפרט מנהא קתלת ואן אכ'ד' מנהא דון ד'אלך אסכרת.

{59} קאל חנין יעני שגרה אלבנג לאן פי אררגאל מן יטעמהא פיטרב מן אלטעמהא ויסתפהא פי שי מן אלאשרבה ויאכ'ד' מתאעה ויסמא אלמנג.

<sup>119</sup> Compactum L.

<sup>120</sup> [...]: que vocatur Mederat L.

<sup>121</sup> l. planta deaurata, quia eius folia habent colorem auri L.

<sup>122</sup> Pistantur L.

<sup>123</sup> Que vocatur Palpebra oculi L.

<sup>124</sup> Et incarnat, et est mirabiliter abstersiva L.

<sup>125</sup> [...]: quae faciunt vomere L.

<sup>126</sup> Pauci medici L.

<sup>127</sup> Editors' emendation; MS נאפד.

<sup>128</sup> Planta que vocatur Condisi L.

**{60} קאל גאלינוס** אלש[גרה] אלתי יקאל להא >[... ריחהא] <sup>129</sup> תנפע גמיע מא ינפע כ'דאעה <sup>130</sup> אלרגאל וינבגי איצ'א אן יעדל בהא כתעדילהא פאן מצ'רתהא כמצ'רתהא.

**{61} קאל חנין** אנמי עני שגרה אלכ'שכ'אש אלסוד אלתי יעמל מן עזירהא אלפיון ואנמי סמיית בהד'י אלסם לאן עזירהא אלפיון אד'י סקי מנהא לאלקתל ודכ'ל אלטביב פאנה ירא מן סקי מנה לא יקדר יתכלם לה בת' ולא יטיק אלחרכה אצלא פאן כאן אלטביב [חא]ד'קא (?) <sup>131</sup> מסח בעי' אעצ'א[ה] אלמסק מסחא שדידא >חתי יסכן אלעצ'וה [...] <sup>132</sup> ת'ם ישם אלטביב אלעצ'ו אלממסוח פאנה ישם ראיחה אלפיון פיעלם אנה סקי פבאלגה במא ידפע מצ'רתהא.

**{62} קאל גאלינוס** אלשגרה [אלתי] (?) <sup>133</sup> תנבת בין אלד'רה <sup>134</sup> תחבס אלדם ותגפף אלקרוח ואן דק [ורק]הא (?) <sup>135</sup> ווצ'ע עלי אלורם חללה והי מן אלדויה אלמפרטה אלסאהל.

**{63} קאל חנין** אנמי ענא >שגרה [...] פערף בחב אלניל <sup>136</sup> אלברי לא כ'יר [282] פיה ואלבסתאני כ'יר פיה ואכת'ר מא ינבת בין אלד'רה <sup>137</sup> ולד'אלך כתמהא גאלינוס ואצ'אפהא אלי אלמואצ'ע אלתי תנבת פיה.

**{64} קאל גאלינוס** אלטיר אלד'י יסמא קתיל אלרעד הדי אלטאיר תנפע מרארתה מן אלצדאע וינפע דמה מן וגע אלד'ן >ואד'י אכל אלקאסי אלקלב מן אפיד'ה הדי אלטיר פואד'א לאן קלבה [...] בקסאותה. <sup>138</sup>

**{65} קאל חנין** הדי אלטיר יקאל לה אלסלוי <sup>139</sup> לא יקוא עלי צות אלרעד פאדא ג'א איאם אלמטאר צאר הדי אלטיר אלי לגג אלבחר פאנכמש פי בעי' אללג חתי לא יסמע צות אלרעד פאן סמעה מאת פאד'י אנקצ'ת איאם אלסנה כ'רג הדי אלטיר יקטע אלי אלמואצ'ע אלרטבה אלי וקת אלג'ית' איצ'א <sup>140</sup>.

**{66} קאל גאלינוס** אלחגר אלד'י יסמא מולד אלנסור אד'י וצ'עתה אלמראה פי חגרהא וקד עסרת עליהא אלולאדה ואכ'דתה בידהא או עלקתה פי חקויהא [...] ולדת עלי אלמכאן .

<sup>129</sup> *Insipidi odoris L.*

<sup>130</sup> אלאז: כ'דאעה.

<sup>131</sup> *Subtilis intellectus L.*

<sup>132</sup> *Quousque palma fricantis sentiat membra fricata caleferi L.*

<sup>133</sup> *Quae L.*

<sup>134</sup> *Alia sata L.*

<sup>135</sup> *Eius folia L.*

<sup>136</sup> *Planta cuius granum vocatur Granum indicum L.*

<sup>137</sup> *Alias arbores L.*

<sup>138</sup> *Et quando comeditur confert cordi, et laetificat ipsum L.*

<sup>139</sup> *Curve L.*

<sup>140</sup> *Credit ludeus quod sit qualula add. L.*

{67} קאל חנין >ענא חגר אל עלי הייה (?) אלג'לוי יגי (?) בעצ'הא עלי היית אלגוזה פי וסטה שי יתקלקל ויתחרך מת'ל<<sup>141</sup> אלחנש פאד'י עסר עלי<<sup>142</sup> אנת'י אלולאדה מצ'י אלנסר אלי בלאד אלגבל (?) פאתי בהד'א אלחגר מן חית' יעלם מוצ'עה ואלקאה אלי אל'אנת'י פיד'הב ענהא אל'אוגאע ויכ'רג ענהא אלביץ' ולא יוגד הד'י אלחגר אלא פי אואכר אלנסור >ותסמיה אלרום בלג'תהא <[...]><sup>143</sup>

{68} קאל גאלינוס אלשגרה אלמסמא >מברד אללהב<<sup>144</sup> תנפע מן אלצדאע אלשדיד אד'י יד' מן שדת בכ'אר אלצפרא פאד'י וצ'עתה עליה בדא מן סאעתה ואד'הב בוגעה פאן וצ'ע פי בית מחמום ד'הבת ענה אלחמא .

{69} קאל חנין אנמי עני שגרה יקאל להא באליונאניה <[...]><sup>145</sup> ואנמי סמיית בהד'י <[...]><sup>146</sup> אללהב לאן אנסאן אד'י אכ'ד' מנהא <ו [...] לחמאם><sup>147</sup> יד' ברד חתי לם יד' פיה חרארה וצאר בארדא והו דאר ציני אלצין.

{70} לאלחפץ' ג'דרא[הם] בזר כרפס ומת'לה כמון כרסאני ומת'לה <[...]> [..] ומת'ל אלגמיע סכר טברזד יסחק ויסתפ ג' איאם <[...]>

תם ד'אלך.

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<sup>141</sup> Intelligit Galenus de lapide qui intus habet lapillum parvum ad instar armillae, et sentitur cum vibratur, et est grossitudinis unius nucis.

<sup>142</sup> Editors' emendation; MS עליה.

<sup>143</sup> Et vocatur lingua Romana Immarrion, credo quod sit lapis pregnantis L.

<sup>144</sup> Editors' emendation; MS מברוד? אללהב. Infrigidatrix inflationis L.

<sup>145</sup> [...]: Cominar L.

<sup>146</sup> [...]: quia refrigerat inflationem L.

<sup>147</sup> Et intrat in balneum bene calidum L.