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The Syriac Christianization of a Medical Greek Recipe: From Barbaros Hera to the “Apostles’ Ointment”

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The Syriac Christianization of a Medical Greek Recipe: From Barbaros Hera to the “Apostles’ Ointment”

Abstract. During the Late antiquity, several works by Galen (2nd–3rd CE.) were translated into Syriac for the first time by Sergius of Rēšʿaynā (6th CE.), starting up the Hippocratic-Galenic medicine in Syriac Language. Based on these translations, there arouse novel versions of compound medicines in Syriac, such as the “Apostles’ Ointment” which is found in The Book of Medicines, possibly from Abassid period, edited and translated by E.A.W. Budge in 1913, which contains more ancient Syriac medical prescriptions. The textual pharmaceutical study regarding the therapeutic uses and qualitative composition of the ‘Apostles’ Ointment’, and its comparison with a kind of plaster (barbaros) which appears in various Late antiquity Greek recipes (Galen, Oribasius, Aetius of Amida, and Paul of Aegina), reveal the micro-transformations suffered to a new and final Syriac Christian version which we here introduce.

Keywords: Apostles’ Ointment, The Book of Medicines, Syriac, Greek tradition

Introduction

The “Apostles’ Ointment” from the anonymous treatise known as The Book of Medicines¹ is the Syriac version of a medical prescription of Greek origin, used as plaster to treat bleeding wounds. A Greek similar recipe appears in chapter 22,
from the book 2 of Galen’s treatise *De compositione medicamentorum per genera*, where it receives the name Ἡρα (Barbaros Hera, ed. Kühn, 13.557–560)², although possibly ἄλλη ἕναιμος³ Ιουλίανοῦ too (“Other enaimos by Iulianus”, ed. Kühn, 13.557). Years later, the same compound appeared again in the Greek writings of renowned physicians from the Late Antiquity period, who gave it different designations, not varying considerably from the mentioned name. Oribasius calls it Βάρβαρος ἕναιμος (Barbaros enaimos) in *Eclogae medicamentorum*, 87, 7, 1–9 (ed. Raeder, 6.2.2.264)⁴, Aetius of Amida distinguishes it as Ἡρᾶ Καππάδοκος βάρβαρος (“Cappadocian Hera”) in *Iatricorum liber XV*, 14, 30–45 (ed. Zervos, p. 7–138)⁵, and Paul of Aegina uses the name Βαρβάρα ἕναιμος (Barbara enaimos) in *Epitomae medicae* 7, 17, 42, 1 (ed. Heiberg, 7.358)⁶. 

The author of *The Book of Medicines* also transmit a Syriac recipe (chapter 8, ed. Budge I, p. 152–153; II, p. 165–166) similar to the Greek formulae⁷, which

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³ According to F. Rodríguez Adrados et al., *Diccionario Griego-Español*, Madrid 2020, http://dge.cchs.csic.es/xdge/, ἕναιμος has the medical meaning of “full of blood”. For its part, the singular neuter noun, τὸ ἕναιμον, has the meaning of “part of the body that contains blood”. The term ἕναιμος also denotes the idea of “hemostatic, which serves to staunch the blood”, as a φάρμακον (cf. *Pedanii Dioscuridis Anazarbei de materia medica libri quinque*, 5, 13, 1, vol. I–III, ed. M. Wellmann, Berlin 1907–1914 (cetera: Dioscorides)), and of “hemostatic medicine”. Finally, its use refers to the “bleeding” and to “bleeding wounds” (cf. Dioscorides, 1, 110, 2).


retains most of the ingredients noted down by the previous authors, while adding others and radically changing the name given by the Greek texts. Instead of reflecting the exact way in which the name of the prescription is rendered in its original Greek language, the anonymous author of this work record the compound with the words: ܫܠܝܚܐ ܬܪܥܣܪܐ ܫܡ ܥܠ ܬܪܥܣܪܬܐ ܕܡܬܩܪܐ ܐܚܪܢܐ (“Another [plaster ܥܨܒܐ], which is called the “Twelve”, after the Twelve Apostles” (Fols. 73b–74a, ed. Budge I, p. 152–153), possibly reflecting the Syriac Christians as the first physicians to Christianize the name of the prescription, as can be deduced from the dating of The Book of Medicines.

From the references found in The Book of Medicines, E.A.W. Budge proposed that the Hippocratic section of this Syriac book⁹, containing the “Apostles’ Ointment”

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⁹ E.A.W. Budge, The Book of Medicines I…, p. 159–160. The Book of Medicines has three main sections: a) a section of medical prescriptions that, according to E.A.W. Budge, The Book of Medicines I…, p. 5–13, it is based on Hippocratic medicine, and is divided into XXIII chapters, missing chapters I, II and XXIV, absent in the original manuscript. For Hippocratic medicine, also called Classical or Scientific, cf. O. Temkin, Galenism. Rise and Decline of Medical Philosophy, Ithaca 1973, and V. Nutton, Ancient Medicine, London 2004; b) an astrology section, which is not within our competence, although we know that it was used to diagnose and know the right time to prescribe a medicine. This section has been studied independently. Cf. S. Rudolf, Syrische Astrologie und das syrische Medizinbuch, Berlin 2018 [= STMAC, 7]; c) a section of native medical prescriptions, which is not within our competence for our objective, since, according to our criteria, it does not have important connections with Greek medicine, and that we could classify as empirical and magical. According to E.A.W. Budge, The Book of Medicines I…, p. 167, this section was reserved for the ignorant and credulous.
and other prescriptions\textsuperscript{10} possibly based on Greek medical works, is a translation into Syriac of the lectures of an Alexandrian teacher\textsuperscript{11} (6\textsuperscript{th} century), carried out by a Syriac doctor associated with one of the great Syriac Medical Schools of the first centuries of the Christian era\textsuperscript{12}. However, E.A.W. Budge’s thesis received different opinions from later scholars. M. Meyerhof, for example, also argued that the author may have been Ahrun, a Jacobite-Christian physician and priest, who taught in Alexandria during the 6\textsuperscript{th} century\textsuperscript{13}, and whose work \textit{Pandecte} was translated into Syriac by Gesios\textsuperscript{14} and, from there, into Arabic by Māsarjawayh, under the name \textit{Kunna}\textsuperscript{15}. Another argument in favor of placing the Syriac work in the Late Antiquity or Early Islamic period is that of P. Gignoux, who observed that, in the text, there are medical terms and names of prescriptions in the Pahlavi language\textsuperscript{16} transliterated into Syriac, and who argued that some of these prescriptions

\footnotesize
\begin{itemize}
\item \textsuperscript{11} The author of \textit{The Book of Medicines} says: Now when I was in Alexandria, a certain villager was bitten by an asp in one of the fingers of his hand when he was at no very great distance from the city. Immediately he tied round the lowest joint of his finger, which was close to the palm of his hand, a strong bandage, and ran straightway to a certain physician whom he know at the gate of the city, and entreated him to cut off his finger from the lowest joint, namely that which was in the palm of his hand. He expected that if this could be done he would suffer no [further] injury, and his expectation was fulfilled as he thought it would be, for he was saved, and lived, and this only did he seek (cf. translation E.A.W. Budge, \textit{The Book of Medicines II}…, p. 25). According to E.A.W. Budge, the author mentions a case of the use of the “tour- niquet”, and another case of a man who was bitten by a viper, and who was saved by cutting off the joint that had been bitten, presumably in the neighbourhood of Alexandria, and it seems that he made note of these cases, as physicians do.
\item \textsuperscript{12} E.A.W. Budge, \textit{The Book of Medicines I}…, p. 5, 159–160, adds that those schools could have been those of Edessa (Urfa) and Amid (Diarbekir), and Nisibis. On the medical schools of Syriac tradition, cf. E.R. L’École d’Édesse, Paris 1930; A.H. Becker, \textit{Fear of God and the Beginning of Wisdom. The School of Nisibis and the Development of Scholastic Culture in Late Antique Mesopotamia}, Philadelphia 2006 [= D.RLAR]; C.R. Le Coz, \textit{Les chrétiens dans la médecine arabe}, Paris 2006, p. XLIV, who suggests that the translation is from the 4\textsuperscript{th} century: Selon lui, il s’agirait de la traduction des leçons d’un professeur d’Alexandrie du IV\textsuperscript{e} siècle effectuée par un professeur de Nisibe […] .
\item \textsuperscript{14} Gesios was a native of Petra, of a Jacobite Christian religious denomination (late 5\textsuperscript{th} and early 6\textsuperscript{th} centuries). Cf. C.R. Le Coz, \textit{Les chrétiens}…, p. 59–61.
\end{itemize}
had circulated before Pahlavi disappeared completely during the Abbasid period. C.R. Le Coz also agrees with E.A.W. Budge’s thesis and, as M. Meyerhof does, claims that the author of *The Book of Medicines* could have been a “Jacobite” Christian. S. Bhayro, on the contrary, argues forcefully against the thesis put forward by E.A.W. Budge in the early 20th century. First, he considers that the work is hardly a possible translation or a Greek lesson in the following terms:

Budge is correct in that his manuscript does indeed contain much Greek science in Syriac translation. Furthermore, it is indeed likely to be a Nestorian scholarly text. But the way in which the Greek science has been received within the text, with its careful ordering of earlier known medical material in abridged form, coupled with the wealth of non-Greco-Roman medical lore, suggests that this is not a translation of Greek medical work or series of lectures into Syriac. Rather, it is a compendium based on a combination of Greco-Roman and Mesopotamian sources.

Then, he elaborates on the idea:

This very much contrasts with the approach of earlier translators such as the sixth-century Sergius and the ninth-century Hunayn. The need for such an easy to use, practical medical handbook may have been a major motivation in the production of the BoM, but another factor may have been the wider intellectual context of the 12th century – the so-called Syriac Renaissance, which saw a flourishing of Syriac intellectual activity between the 11th and 13th centuries.

P.E. Pormann and E. Savage-Smith, on the other hand, did not dare to propose a dating and made a description of the text, which falls somewhere in between E.A.W. Budge’s and S. Bhayro’s proposals, as follows:

1998 [= OCA, 256], p. 727. The name of the recipe in Syriac character *gwgršn šhryr‘n* is meaningless. However, if those same characters are read in the Pahlavi language as *gugārišn šahryārān*, can be translated as “real digestive”. The Pahlavi language, also called Middle Persian, was the official language of the Sassanid Empire (226–651), but it survived until the 9th century.


19 C.R. Le Coz, *Les médecins*..., p. 44; IDEM, *Les chrétiens*..., p. 61, 179, where he argues that he was a “Jacobite” Christian, since these were the only ones who could study in Alexandria, implicitly admitting that the Nestorians were prohibited from entering Byzantine territory.


21 Cf. idem, p. 126.


Much mystery surrounds it: different scholars have speculated when it might have been written, with suggestions running from the sixth to the thirteenth centuries. Whatever the moment of the final compilation, it is evident that this text contains much material dating back to the sixth and seventh centuries24.

Finally, Grigory Kessel, after having consulted him about the dating of *The Book of Medicines*, concludes:

Nobody knows for sure when that text was composed. But even if it was written, let’s say, at the 9th century (one of the hypothesis) it nevertheless relies and uses material that goes back to the Greek sources of the 2nd–6th.

One part of *The Book of Medicines* deals with medical recipes and it may be an original Syriac text25.

Without a univocal consensus yet, we propose a dating for the “Apostles’ Ointment” by means of a philological-comparative study, thus avoiding a single dating for all the prescriptions in *The Book of Medicines*, whose content and authorship(s) have not yet been fully studied. The philological analysis we have embraced consists of examining the term used for each simple drug appearing in the formula of our plaster, in comparison with the Syriac nomenclature of varied etymology26, noted in MS BL Add 14661 by Sergius (6th century)27, *Syriac Lexicon* by Bar Bahlul (10th century)28, and *Le candélabre des sanctuaires* by Bar Hebraeus (13th century)29. Thus, when the terms of the prescription are traced in these works and the philo-

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26 The Syriac nomenclature used for the simple medicines present in a certain medical prescription can generally be of Semitic, Persian or Greek etymology. As Semitic terms tend to remain unchanged over time, unlike the different ways of transliterating them into Syriac from Greek, it is convenient to take the latter into account for philological analysis, since it is likely to be found in different ways depending on the dating the source.
27 This is the Syriac translation of books 6, 7 and 8 of Galen’s *De simplicium medicamentorum temperamentis ac facultatibus*. A. Merx, *Proben der syrischen Uebersetzung von Galenus' Schrift über die einfachen Heilmittel*, ZDMG 39.2, 1885, p. 237–305, edited only the alphabetical list of medicinal plants.
logical analysis is carried out on the Syriac transliterations of the signs of the Greek writing system, we observe differences in the words according to the time of representation. In the case of the drugs from the “Apostles’ Ointment” present in the three works mentioned above, the analysis of some products deriving from medicinal plants – bdellium, resin, wax, galbanum, opopanax – yields the following result:

<table>
<thead>
<tr>
<th>Greek</th>
<th>The Book of Medicines</th>
<th>MS BL Add 14661</th>
<th>Syriac Lexicon</th>
<th>Le candélabre</th>
</tr>
</thead>
<tbody>
<tr>
<td>βδέλλιον⁴⁶</td>
<td>ܒܕܘܠܝܘܢ</td>
<td>37 ܒܕܠܝܐܘܢ</td>
<td>38 ܒܕܘܠܝܘܢ</td>
<td>Not found</td>
</tr>
<tr>
<td>πίσσα⁴⁸</td>
<td>ܪܗܛܢܐ</td>
<td>40 ܪܐܛܝܢܐ</td>
<td>41 ܪܗܛܢܐ</td>
<td>42 ܪܝܛܝܢܗ</td>
</tr>
<tr>
<td>κηρός⁴⁴</td>
<td>ܩܪܘܬܐ</td>
<td>44 ܩܐܪܘܣ</td>
<td>45 ܩܪܘܬܐ</td>
<td>Not found</td>
</tr>
</tbody>
</table>

30 MS BL Add 14661 and the section “des plantes” in Grégoire Aboulfaradj dit Barhebraeus, p. 229–439, only mention herbal medicines.
36 Dioscorides, 1, 67.
37 Cf. BL Add 14661 f.4r5.
40 Cf. BL Add 14661 f.56v29.
44 Cf. BL Add 14661 f.33v3.
47 Cf. BL Add 14661 f.57r1.
51 Cf. BL Add 14661 f.60v6.
Although not all the terms appear in the three works, the comparative study from the table above leads us to suggest that the Syriac formulation of the “Apostles’ Ointment” dates from the Abbasid period\textsuperscript{54}, since simple medicines are

\textsuperscript{54} The Christianization of the name of the Greek recipe for Apostles’ Ointment by the Syriacs of late Antiquity is opposed to the thesis transmitted during modern times that attributes the assignment of Apostles’ Ointment to the Arabs. In Arabic it appears for the first time in the *Dispensatorium Parvum* (al-*Aqrābādhīn al-saghīr*), ed. O. Kahl, Leiden 1994 [= IPTS.TS, 16] (9\textsuperscript{th} century CE) with the name منديا (mndyā ointment) and [also] known as *Venus ointment*, mentioning twelve ingredients. Cf. O. Kahl, *Dispensatorium Parvum*…, p. 206. Sābūr was a Nestorian Syriac Christian physician from southeastern Iran who was educated at the Gundishapur School and practiced medicine there, until he was appointed court physician by the ‘Abbāsid caliph al-Mutawakkil. For its part, in the book known as al-*Qānūn fi al-ḥawāriyīna*, Bulaq, al-*Matbah al-ʿĀmirah* 1878 (cetera: Avicenna), Avicenna incorporates in Arabic a recipe of Greek-Syriac origin in the eleventh century, which names Merhīm al-rūsλ: Ṭaḥāliha Ai Merhīm al-hawāriyīn wa iبعد Merhīm al-zawzaa (Apostles ointment is that of ṣālyh; that is, apostles ointment, and [also] known as Venus ointment, and mndyā ointment […], Avicenna, 5, 405). In the name of the recipe we find that the word Ṣālyh, which is meaningless in Arabic, is transliterated from the Syriac ṣālyh, and it means ‘of the apostles’. Cf. J.P.S. Margoliouth, S.R. Payne, A *Compendious Syriac Dictionary. Founded upon the Thesaurus Syriacus*, Oxford 1903, p. 580. Avicenna might not know the Syriac language, so he chooses to transliterate instead of translating the hawāriyīn, another Arabic term for “apostles”. Cf. Ḥaw, R.P.A. Dozy, Supplément aux dictionnaires arabes, vol. I, Leiden 1927. At the same time, the word mndyā, which does not make sense in Arabic either, is perhaps transliterated from the Syriac mndyā, which means “be dispersed” (cf. H. bar Bahlul, R. Duval, *Lexicon*…, p. 1104), a term that could be associated with an ointment. As for the complete recipe, Avicenna indicates:

already transliterated in Syriac from Greek in the *Syriac Lexicon* (10th century) the same way that *The Book of Medicines*, while they are mentioned differently in the other two sources\(^55\) (when they appear). This allows us to propose that, at least during the Abbasid period, a Syriac version of the Greek prescriptions existed, with a name Christianizing for the first time. The Syriac author called this new version of the prescription Βάρβαρος Ἥρα o ἔναιμος “Apostles’ Ointment”, slightly modifying its composition and therapeutic indications. The analysis of the therapeutic uses of the Syriac prescription, in addition to its qualitative composition, in comparison with the plasters of Galen, Oribasius, Aetius of Amida and Paul of Aegina, will allow us to investigate these micro-transformations introduced by the Syriac physicians in the “Apostles’ Ointment”, as we will demonstrate in the following sections.

**The “Apostles’ Ointment” from *The Book of Medicines***

In chapter 8 from *The Book of Medicines* (Fols. 53a–74a), there is a section on plasters for the therapeutic treatment of nerve injuries (Fols. 72b–74a)\(^56\). According to the author, when the nerves receive a strong blow or become inflamed because of an abscess, or when they are stabbed, crushed, cut or they become ill from the bite of an animal, they need warm and delicate medicines. He recommends warming by means of sweet oil without astringent properties and, especially, the application of plasters, whose therapeutic action, composition and preparation is detailed in a section about several pharmaceutical plasters, formed with fats and substances with different active principles, suitable for their application in wounds. In addition, he names a total of five prescriptions, which are detailed below: 1) “Plaster (or, liniments) of euphorbium which are good for the wounds that take place in the nerves, and for the bites of evil beasts” (Fol. 73a); 2) “Another unguent of euphorbium which is good for wounds of the nerves, and for abscesses of all kinds which are caused by colds and chills, and for wounds caused by evil beasts” (Fol. 73a); 3) “Another unguent of opopanax and vinegar which is to be used for the wounds that come in the nerves, and for the bites of a mad dog” (Fol. 73a); 4) “Another, a musk fillet” (Fol. 73b), which is used a) “for the cutting of the nerves”, b) “for injuries of the nerves even if they are cut or crushed”, c) “for the sores that are produced by breaking of bones”, d) “for the collection of water”, e) “for the constriction, and for abscesses in the anus”; 5) “Another [unguent] which is called the “Persian”, and which is used for pains” (Fol. 73b). Within this group, he includes

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55 This method is valid assuming that the sources are complete in terms of the terminology used in the corresponding periods.

a sixth plaster, which he calls “Another [plaster]”\(^{57}\), which is called\(^{58}\) the  
“Twelve”, after the Twelve Apostles” (Fols. 73b–74a, ed. Budge I, p. 152–153; II,  
p. 165–166). The author does not explain why he decided to give the plaster this  
name. He only says it is related to the “call [of the] twelve, in reference to the  
Twelve Apostles”. Because of this denomination, we consider that it was possibly  
a popular name at the time, perhaps known prior to the annotation in *The Book  
of Medicines* and related to the “Twelve Apostles”, who were Jesus’ followers. Nor  
does he mention the word “plaster”, which he uses the term “other”, fol-
lowed by a long list of therapeutic applications:\(^{59}\)^{60}  

\[
\begin{align*}
\text{Another [plaster] which is called the Twelve,} & \text{ after the Twelve Apostles, and which is useful for all difficult wounds, which come in the nerves and in every member. It is emollient for hard abscesses and dense secretions of viscous pus, and dissolves scrofula, and dissipates cancers, and emollient for sores, and helps old ulcers, and pain in the ears, and boils in the nostrils, and the severe pain which comes in the womb.}
\end{align*}
\]

He then lists the drugs in the prescription and the quantities of each drug:

\[
\begin{align*}
\text{litharge 30 estire}^{59} & \text{ gum ammoniac 7 bdellium} \\
7 \text{ resin 16 drachms wax 16 verdigris 9 galbanum 9 myrrh 8 opopanax 8 aloes 12 frankincense 12 birthwort (long) 12 olive oil (in the summer) 1 litra}^{60} & \text{ olive oil (in the winter) 1,5.}
\end{align*}
\]

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\(^{58}\) ܕܡܬܩܪܐ “call”, cf. Mt 1: 16.  


\(^{60}\) The *litra* contains twenty *estire* (i.e. 100 drachms).
As can be observed, the Syriac prescription totals fourteen medicines, including drugs of animal, vegetable and mineral origin. He mentions wax, which is the animal excipient par excellence to give consistency to the preparation. He also adds mineral drugs, such as litharge\textsuperscript{61}, and verdigris\textsuperscript{62}, which chemically are lead monoxide and cupric acetate respectively, both responsible for the healing and astringent action. Herbal drugs, myrrh, aloe\textsuperscript{63}, and frankincense\textsuperscript{64}, serve the same function. In addition, both gum ammoniac\textsuperscript{65} and galbanum\textsuperscript{66} can absorb gum-resin, bdellium, which is an oleo-gum-resin, used as an emollient\textsuperscript{67}, the resin is adhesive and aromatic\textsuperscript{68}, and the opopanax, used to treat ulcers, the bite of rabid dogs and to heal various wounds\textsuperscript{69}, is also added as an aromatic\textsuperscript{70}. Vinegar is also included in the Syriac prescription and has a twofold action: it is part of the production process, providing an acid medium for the gums to retain their adhesive properties, and it is used to stop the bleeding\textsuperscript{71}. Finally, olive oil, which is the vehicle or excipient, makes it possible to contain the rest of the active substances. This oily vehicle, together with the wax, besides having occlusive and emollient properties, has the purpose of dissolving pharmacologically active oily substances, while the minerals are dispersed in this vehicle until they form a paste.

The fourteen ingredients from the prescription, then, are basic substances with a broad spectrum of use in drug production. Each plaster ingredient serves a particular function as a binder, healing, astringent, absorbent, emollient, adhesive and even aromatic agent. However, the pharmaceutical art required not only knowledge of the properties of the basic substances, but also an indication of the correct elaboration process in order to obtain an effective medicine, which the Syriac prescription details in these terms:

\textsuperscript{62} Cf. Dioscorides, 5, 88. On its irritant capacity for the skin, cf. J.B. Leikin, F.P. Paloucek, Poisoning and Toxicology…, p. 779.
\textsuperscript{68} In this regard, the different resins mentioned by Dioscorides can be consulted in De materia medica, 1, 71, 3–4. On its antimicrobial activity, cf. J.A. Duke, Handbook…, p. 282.
\textsuperscript{69} Cf. Dioscorides, 3, 48.
\textsuperscript{70} Cf. Dioscorides, 3, 48.
\textsuperscript{71} Cf. Dioscorides, 5, 13.
Pound the litharge and beat it to a powder, then pour a little oil upon it, and crush it again until it becomes like a plaster, and boil it over a fire until it dissolves and becomes like honey. Then incorporate the gum ammoniac\(^{72}\) and myrrh and frankincense and opopanax and bdellium in vinegar, and work them up together until they are dissolved. Then grind verdigris, aloes, and birthwort and pour on the mixture, and work up and use for the pains which have been described. It will keep the wounds free from abscesses, and free from pain and disease, and will heal them.

This pharmacotechnical process is logical according to current pharmacy knowledge. The first step consists of forming a paste between a powder (litharge) and an oily element (oil). In addition, heat has the function of reducing the viscosity of the paste, facilitating its manipulation. At the same time, the gomorresins from the medicinal plants (gum ammoniac, myrrh, frankincense, opopanax and bdellium) are dissolved in vinegar. Finally, the remaining ingredients (verdigris, aloe, and birthwort) are incorporated, in a ground form, to the mixture of the first two steps. In this last part of the prescription, the author also gives some general advice regarding the relationship between the formulation, the therapeutic indications and the season of the year in which it is appropriate to treat certain pathologies, as well as recent and old wounds. Therefore, he claims it is useful for long-lasting ulcers, ear pain, infections in the nostrils and pain in the abdomen, possibly caused by some superficial infection. At the same time, he indicates its application for deep wounds, which involve nerves in different parts of the body and which can become infected.

The author ceases his exposition of the prescription “Apostles’ Ointment” here, after giving precise instructions on the composition formula of the plaster, including the drugs involved in it and their quantities, the way to elaborate it and its application. Now, the Greek medical texts of the Antiquity and Late Antiquity period refer to a plaster with characteristics similar to those mentioned in the Syriac prescription, which could be the sources of that version.

The Ἁλλη ἐναίμος Ἰουλιανοῦ and Βάρβαρος Ἡρα by Galen


73 The first is attributed to Andromachus. It is made up of the following medicines: 6 [drachmae] of bees wax, 6 [drachmae] of pitch, 6 [drachmae] of pine resin, 6 [drachmae] of bitumen, 24 [drachmae] of frankincense-tree, 1 [drachma] of oil (κηροῦ ςʹ. πίσσης ςʹ. ῥητίνης ςʹ. ἀσφάλτου ςʹ. λιβάνου κβʹ. ἑλαιοῦ κοτύλην γαʹ. ἀλόης καὶ ὀπίου καὶ σμύρνης ἀνὰ δʹ. τερμινθίνης οὐγγίας κδʹ. μανδραγόρου χυλοῦ στʹ). The second, simply called Ἁλλη, is made up of 2 litra of pitch, 1 litra of bees wax, 1 litra of aromatic ammoniac, 6 litra of gum, 3 litra of white lead, kotyle of olive oil, 4 kotylae of vinger (πίσσης λίτρας βʹ. ἀσφάλτου λίτραν αʹ. κηροῦ λίτραν αʹ. ἀμμωνιακοῦ θυμίαματος γο στʹ. μάννης γο στʹ. ψιμυθίου γο γʹ. ἐλαίου κοτύλης ήʹ. ἄλλη). The third is called "other melaina" (μέλαινα ἄλλη). It is prepared with 1 litra of dry pine, 1 litra of olive oil, 6 unciae of gum, solution of blue vitriol, copper sulphate, striped verdigris, half kotyle of olive oil, half kotylke of vinegar (πίσσης ἄλλης ἰουλιανοῦ (ed. Kühn, 13.557); and 4) Βάρβαρος Ἡρα

74 Galen does not give the name of the first recipe. It only indicates its medicines and quantities: 8 litrae of pitch, 6 litrae of bees wax, 8 unciae (?), 5 litrae of pine [resin], 4 unciae (?), 4 litrae of bitumen, 1 litra of olive oil, 6 unciae (?), 24 [litrae] of litharge, white lead and verdigris, half litra of frankincense, 12 [drachmae] of liquid styrhia, 4 unciae of clefi, 12 [drachmae] of opopanax, scale [of metal], galbanum, 4 [drachmae] of aloe, opium, myrrh, 24 unciae of turpentine, 6 [drachmae] mandragora juice, 6 kotylae of vinegar (Πίσσης λίτρας ηʹ. κηροῦ λίτραν αʹ. σμύρνης, χαλβάνης ιβʹ. σκεύαζε). Galen also indicates a second recipe, which is the proportion of the simple barbaros
The “Other enaimos by Iulianus” is attributed to Iulianus (of Alexandria) (ca. 140–160 CE). Galen would have met this Methodist physician sometime during his stay in Alexandria, as J. Scarborough infers, and passed on the drugs in his prescription, composed as follows:

50 drachmae of litharge, 50 drachmae of bitumen, 50 drachmae of bees wax, 50 drachmae of Bruttium pitch, 15 drachmae of toasted pine resin, 12 drachmae of copper flakes, 14 drachmae of incense, 8 drachmae of galbanum, 14 drachmae of copper ore, 6 aloes drachmae, 4 [drachmae] of myrrh, 6 long-born aristolochia, 4 drachmae of round-born aristolochia, 4 kotylae of old oil; but I [add] 3 kotylae of oil.

Galen lists here the active ingredients and excipients necessary for the mixture of fifteen drugs in total, without an explanation of their therapeutic application. However, J. Scarborough considers that this plaster would have been used with the combination [of the medicines] (ἡ δὲ τῆς ἁπλουστέρας βαρβάρου συμμετρία τῇ συνθέσει), and is prepared with 5 [drachmae] of pitch, bees wax, pine resin, toasted resin, bitumen, 1 litra of these, 10 of litharge, 5 of white lead, 5 of vedigris, 3 of oropanax; 9 unciae of winter oil, 6 unciae of summer (πίσσης, κηροῦ, ῥητίνης πιτυΐνης, ῥητίνης φρυκτῆς, ἀσφάλτου τῶν εʹ. τούτων ἀνὰ λίτραν αʹ. λιθαργύρου ιʹ. ψιμυθίου εʹ. ἰοῦ εʹ. ὀποπάνακος γʹ. ἐλαιοῦ χειμῶνος οὐγγίας θʹ. θέρους οὐγγίας στʹ). For this recipe, he indicates the following preparation: the soluble and dry are poured into a mortar to be crushed with acid vinegar (τὰ τηκτὰ κατὰ τῶν ξηρῶν καταχεῖται λελειωμένων ἐν θυείᾳ μετ’ ὄξους δριμέος). And he adds 1 of henbane juice, medium (ἐὰν δὲ ἀνωδυνώτερον εἶναι βουληθῇς τὸ φάρμακον, προσμίξεις ὑοσκυάμου χυλοῦ αʹ. ἡμίσι. καὶ ὀπίου αʹ).

75 All translations from the original Greek to English are by Paola Druille, who follows the editions specified in the notes.

76 J. Scarborough, Iulianus (of Alexandria?) (ca 140–160 CE), [in:] The Encyclopedia of Ancient Natural Scientists. The Greek Tradition and its Many Heirs, ed. P.T. Keyser, G.L. Irby, London–New York 2008, p. 448, bases its deduction on the statement it is already more than twenty years since I met him in Alexandria, since when he has written handbook upon handbook, always changing them and altering them, never content with what he has written. He also maintains that Iulianus had studied with Apollonides of Ciprus, although due to Galen’s nuanced condemnation, few remains of Iulianus’s writings remain. Against Iulianus Galen so completely demolishes Methodism’s medical logic that Tecusan simply edits and translates the entire tract to suggest the involuted and precise philosophical sarcasm applied to Methodist doctrine, also explicated by Hankinson (1991: 145–160) (J. Scarborough, Iulianus…., p. 448).
to close wounds and soothe the pain\textsuperscript{77}, and adds that the enaimos, prepared in bulk, probably was an ordinarily available plaster to treat wounds suffered by gladiators. The litharge, the copper flakes and the calcite conferred astringent properties to the skin, the Dead Sea bitumen (asphalts) constituted an occlusive layer to protect it, and the adhesive properties given by beeswax, the carefully roasted pine resin and the pine pitch from Brutcia, would have ensured the practicality of the ἔναιμος. Finally, the smaller amounts of frankincense, myrrh, two types of aristolochia and aloe latex provided the plaster with a mild analgesic and antibiotic quality, augmented with oak gall\textsuperscript{78}. Galen does not provide further information on Ἀλλη ἔναιμος Ἰουλιανοῦ. On the contrary, he quickly introduces the prescriptions of the Βάρβαρος Ἡρα (ed. Kühn, 13.557–560), whose formulations largely coincide with the plaster of Iulianus.

These prescriptions contain a considerably extensive explanation of the various applications the preparations have for the treatment of bleeding wounds and other conditions, in conjunction with the composition of two formulas and medicinal elaboration. As noted above, the first prescription is called “enaimos melaina plasters” (μέλαινα ἔμπλαστρος ἔναιμος). As in the case of Ἀλλη ἔναιμος Ἰουλιανοῦ, Galen does not justify the terms used to name this prescription\textsuperscript{79}. Instead, he adds the possible therapeutic applications (ed. Kühn, 13.557–558):

\[\text{πρὸς τὰς ἀξιολόγους διαρέσεις καὶ μάλιστα πρὸς τὰς ἐν τῇ κεφαλῇ, πρὸς σύργιας, κόλπους, κατάγματα, ... καὶ ἔπειρας καὶ κόλπους, κακοῦ γάρ μεγάλῳ καὶ ἐπὶ τῶν ἀποστημάτων κομισάμενος τὸ υγρὸν ... ἐστὶ καὶ ἴσχαιμος καλλίστη μάλιστα ἐπὶ τῶν αἷμα ἀναγόντων. ἐμπλάσας δὲ εἰς δέρματα δύο, ἓν μὲν ἐπὶ τὰ στήθη καὶ τὰς πλευρὰς ἐπιτίθει, ἕτερον δὲ ἐπὶ τὸ μετάφρενον, παραδόξως ἐπέχει τὸ αἷμα. ... καὶ πρὸς κυνόδηκτα καὶ ἀνθρωπόδηκτα, τὸ ὅλον ἀφλέγμαντος ... λῦε χειμῶνος δι’ ἡμερῶν ἑπτά, θέρους διὰ εὐτεὶν. ... καὶ πρὸς κυνόδηκτα καὶ ἀνθρωπόδηκτα, τὸ ὅλον ἀφλέγμαντος ... λῦε χειμῶνος δι’ ἡμερῶν ἑπτά, θέρους διὰ εὐτεὶν. }

\[\text{for major wounds and especially for those of the head, for fistulous abscesses, fistulous ulcers, fractures; ... to those who suffer from liver and splenic disease, without inflammation ...; for nerves, broken cartilage and bones, place in the opposite direction to the outgoing blood ...}. \text{Also as a drainage for fistulous ulcers, which coalesces to a great extent and carries fluids towards abscesses ...; it is very good for getting stagnant blood moving. Plaster on two parts of the skin, one is applied on the chest and [area of] the ribs, another on the back, applied in the opposite direction to the outgoing blood ...}. \text{For dog and human bites, all without inflammation ...}. \text{It wash (the wounds) after seven days in winter, five days in summer. If there is pressure, [open] it after three days.}

\textsuperscript{77} J. Scarbrough, Iulianus..., p. 448.
\textsuperscript{78} J. Scarbrough, Iulianus..., p. 448.
\textsuperscript{79} In medicine, βάρβαρος, plural βαρβάρα, is the name of various plasters. For Galen, cf. supra notes 73 and 74.
\textsuperscript{80} Cf. LSJ, s.v. κόλπος. It has the meaning of “belly”, but also of “fistulous ulcer” that extends under the skin. Cf. Dioscorides, 1, 128.
This plethora of applications for the treatment of conditions related to bleeding wounds is due to the beneficial drugs that make up the prescription which, in the same way as the “Apostles’ Ointment”, requires pharmaceutical knowledge of the conditions that may affect its efficacy. Galen refers to the exact administration of the plaster, paying particular attention to the condition of the treated wound (ἐὰν δὲ ἐπείγῃ διὰ τριῶν, if there is pressure, [open] after three days) and to the prevailing temperature in the winter and summer seasons (λῦε χειμῶνος δι’ ἡμερῶν ἑπτὰ, θέρους διὰ ε’, open after seven days in winter, five days in summer), and adds up to a total of nine ingredients (ed. Kühn, 13.558), whose precise fractionation and weight of the active ingredients and necessary excipients follow the quantities indicated in the formula specified below:

κηροῦ λίτραν μίαν, πίσσης λίτραν μίαν, ἄσφαλτου λίτραν, μίαν, πιτυίνης λίτραν μίαν, μάννης στʹ. ψιμυθίου ύμημα μίαν, χαλκάνθης οὐγίας δʹ. χαλκάνθης οὐγίας δʹ. ὀποπάνακος οὐγίας βʹ. ἐλαίου ἡμερῶν βʹ.

1 litra of bees wax, 1 litra of pitch, 1 litra of bitumen, 1 litra [resin?] of pine, 6 unciae of gum, 4 unciae of white lead, 4 unciae of copper sulphate, 2 unciae of opopanax, semi-uncia of oil olive, on the one hand semi-mineral, on the other semi-litra, 2 kotylae of vinegar.

He then lays out the process of making the prescription (13, 558–559), describing the pharmacotechnical operations of mixing, melting, grinding, sieving, cooling, as detailed below:

κηρὸν, ἄσφαλτον, ἔλαιον, δρέσο χρύσου [...], eis χύτραν καθαρωτάτῃ τῇ τῆς ἰόν ὑπολείμματος ἐπιμελῶς. ὅταν ἠμερίων ἡ, ἀρας τῇ χύτρᾳ καὶ διαφέρισυ ποσῷ ἐμπασσε διηθημένον τὸ χαλκάνθον λειωθὲν ὅξην, ἐκ τῶν δύο κοτυλῶν κατὰ μικροῦ ἢν μή ὑπερεξήθη [...]. ὅταν ἄπορτον ἠ, ἀρας ἀπὸ τοῦ πυρὸς ἐγχεὶ τὸν ὀποπάνακον πρὸ μίας βεβρεγεμένων εἰς μέρος τοῦ ὑπολειμμένου ὀξου, ἡτο διαλυθῆσαι, εἰς ἐμπασσον τὸ ψιμυθίου καὶ τῇ μᾶννῃ νικοῦ ἐπιμελώς ἐπιμελῶς ἐμπασσε διηθημένον τὸ χαλκάνθον καὶ ἡ μᾶννὴ, καταχεὶ εἰς θυείαν καὶ συγεῖ ἄναμαλαξάς ἀπόθουν καὶ χρύσῳ.

1 litra of bees wax, bitumen, olive oil, a little vinegar [...], melt it in a new pot. Then pitch and fine minced resin are carefully poured on top. When it is half boiled, when removing the pot and cooling it for a certain time, sprinkle the filtered solution of copper sulphate emulsifying with vinegar, with two kotylae little by little, so that it does not boil (completely) [...]. When it does not stain, remove from the heat, pour the opopanax for a maceration in a part of old vinegar, as it dissolves, then sprinkle together the carefully crushed white lead and gum [...], to unify the reserved opopanax that did not boil and the gum, is poured into the glass and allowed to cool, after collecting by rubbing, place and use.
Like the “Apostles’ Ointment”, the elaboration process of Galen’s compound requires a series of operations, which determine the final product. By mixing the active ingredients and excipients, and heating these components, grinding and sieving the solid drugs, and unifying all the ingredients, which also intersperses a careful cooling step, after various moments of heating the ingredients, the physician is assured of obtaining a homogeneous compound with the adequate degree of moisture and softness.

On the other hand, the second prescription included within Βάρβαρος Ἡρα is designated “another barbaros Hera” (ἄλλη βάρβαρος Ἡρα, ed. Kühn, 13.559–560). Unlike the formulation of the μέλαινα ἔμπλαστρος ἔναιμος, Galen explains the name of this prescription using these terms:

On the one hand, this single Hera was designated before the [name of the] ointment, and, on the other, I called it similarly before; however, she has been named melaina by him, and later most of the younger physician are used to calling her barbarians because of the asphalt. He himself wrote about Hera herself as the phrase says.

Galen does not indicate other data about ἄλλη βάρβαρος Ἡρα, nor does he mention the names of the physicians who call this formulation μέλαιναν or βαρβάρους. On the contrary, once the prescription is named, Galen notes down the details of the application of the ointment according to this prescription:

for fresh sores (fresh wounds), fistulous ulcers, [wounds] caused by a dog bite, human bite, inflamed callus lump (with pus), for all [diseases] in the joints […] and for gout […]

Then, he documents the active ingredients and excipients of its composition, together with their fractions and weight (13, 560):

for fresh sores (fresh wounds), fistulous ulcers, [wounds] caused by a dog bite, human bite, inflamed callus lump (with pus), for all [diseases] in the joints […] and for gout […]

1 mine of wax, 1 mine of pitch, 1 mine of toasted pine resin, 1 mine of bitumen judaicum, 10 of litharge, 5 of white lead, 50 of verdigris, 4 of opopanax, 1 kotyle of oil [olive], 1 cup of vinegar.
Finally, he recommends that each of these drugs be carefully mixed, starting from the strict implementation of the steps the physician adds towards the end of his prescription:

\[ \text{ἔψε κηρὸν πίσσαν, ἄσφαλτον, ῥητίνην ἕως τακῇ, ἢτα τὰ λοιπὰ μετὰ τοῦ ἑλαίου λελειο-
τριβημένα ἐμβάλλε, καὶ βαστάσας καὶ μικρὸν διαψύξας ἐκ τοῦ ὀξους κατ’ ὀλίγον ἐπίστασε.} \]

boil the wax, the resin, the bitumen, the pine resin until it melts, then add the rest, mixing with oil, instill little by little, taking and aerating a small [quantity].

It may be noted that Galen devotes a brief space to the preparation of the prescription, the more extensive explanation of which might conform to that added in μέλαινα ἐμπλαστρος. Furthermore, its formulation follows very closely both the one indicated in the two previous prescriptions and the one repeated by the Syriac mixture, as shown in the comparative table:

<table>
<thead>
<tr>
<th>Άλλη ἕναμος Ἰουλιανοῦ</th>
<th>μέλαινα ἐμπλαστρος</th>
<th>ἀλλη βάρβαρος Ἡρα</th>
<th>Apostles’ Ointment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bees wax</td>
<td>wax</td>
<td>wax</td>
<td>wax</td>
</tr>
<tr>
<td>Pitch of Bruttium bitumen</td>
<td>pitch</td>
<td>pitch</td>
<td>resin</td>
</tr>
<tr>
<td>toasted pine resin</td>
<td>bitumen</td>
<td>judaicum bitumen</td>
<td>verdigris</td>
</tr>
<tr>
<td>copper flakes and calcitis</td>
<td>pine [resin?]</td>
<td>toasted pine resin</td>
<td>frankincense</td>
</tr>
<tr>
<td>frankincense</td>
<td>copper sulphate</td>
<td>verdigris</td>
<td>myrrh</td>
</tr>
<tr>
<td>myrrh</td>
<td></td>
<td></td>
<td>galbanum</td>
</tr>
<tr>
<td>galbanum</td>
<td></td>
<td></td>
<td>bdeillium</td>
</tr>
<tr>
<td>aloes</td>
<td></td>
<td></td>
<td>aloe</td>
</tr>
<tr>
<td>oak gall</td>
<td></td>
<td></td>
<td>birthwort (long)</td>
</tr>
<tr>
<td>long-birthwort</td>
<td></td>
<td></td>
<td>birthwort (long)</td>
</tr>
<tr>
<td>round birthwort</td>
<td></td>
<td></td>
<td>birthwort (long)</td>
</tr>
<tr>
<td>litharge</td>
<td>oil olive</td>
<td></td>
<td>litharge</td>
</tr>
<tr>
<td>oil</td>
<td>oil</td>
<td></td>
<td>oil</td>
</tr>
<tr>
<td>old oil</td>
<td></td>
<td></td>
<td>oil [olive]</td>
</tr>
</tbody>
</table>

(in the summer)  
old oil  
(in the winter)
The prescriptions account for 14 (Ἄλλη ἔναιμος Ἰουλιανοῦ) and 10 drugs (μέλαινα ἔμπλαστρος, ἄλλη βάρβαρος Ἡρα) respectively, whose main therapeutic action, as in the case of the Syriac plaster, is against sores, ulcers and fistulas, differing in their etiology “by dog bite or human bite” (κυνόδηκτα, ἀνθρωπό- δηκτα). Of the fourteen drugs described in the Apostles’ Ointment, ten match Ἀλλη ἔναιμος Ἰουλιανοῦ, and seven match μέλαινα ἔμπλαστρος and ἄλλη βάρ- βαρος Ἡρα.

Although we cannot affirm that the Syriac author used one of Galen’s prescriptions for his ointment, or a combination of the three prescriptions based on the best therapeutic efficacy of the drugs that compose them, according to his experience, we can observe that both the therapeutic indications and the qualitative formulation of Galen’s prescriptions are related to the Syriac prescription, beyond the differences in the proper name of the prescription and in the amount of drugs in its formulation. This relationship becomes even more feasible when we observe that other late-antique physicians, who wrote in Greek and may have kept the formulation in force throughout the centuries, replicated the formulations transmitted by Galen with some modifications.

The Βάρβαρος ἔναιμος by Oribasius, Ἡρα Καππάδοκος βάρβαρος by Aetius and Βαρβάρα ἔναιμος by Paul

In the medical treatises by Oribasius, Aetius of Amidas and Paul of Aegina, mention is made of the plaster for bleeding wounds, with indications similar to those mentioned in Galen’s prescriptions. In Eclogae medicamentorum 87 (ed. Raeder, 6.2.2.263–266), Oribasius incorporates a section called Ἔμπλαστροι ἔναιμοι πρὸς νευροτρώτους- αἱ δὲ αὐταὶ ποιοῦσι καὶ πρὸς τὰς περιθλάσεις τῶν νεύρων (“Plasters for bleeding wounds from tendon/muscle injuries, which are also made for nerve contusions” 87 tl. (ed. Raeder, 6.2.2.263). This section contains a total of sixteen plaster formulations81, where Oribasius prescribes a particular plaster,

<table>
<thead>
<tr>
<th>Ἄλλη ἔναιμος Ἰουλιανοῦ</th>
<th>μέλαινα ἔμπλαστρος</th>
<th>ἄλλη βάρβαρος Ἡρα</th>
<th>Apostles’ Ointment</th>
</tr>
</thead>
<tbody>
<tr>
<td>gum</td>
<td>white lead</td>
<td>white lead</td>
<td>gum ammoniac</td>
</tr>
<tr>
<td>white lead</td>
<td>opopanax</td>
<td>opopanax</td>
<td>opopanax</td>
</tr>
<tr>
<td>opopanax</td>
<td>vinegar</td>
<td>vinegar</td>
<td>vinegar</td>
</tr>
</tbody>
</table>

81 Oribasius includes a total of sixteen plasters. These are as follows: “[Plaster] kissinon for tendon wounds and injuries” (Τὸ κίσσινον πρὸς νευροτρώτους καὶ νύγματα, 87, 1), “[Plaster] Indē”
which he calls Βάρβαρος ἔναιμος 87, 7 (ed. Raeder, 6.2.2.264) and which he recommends for the following cases:

πρὸς τὰς ἀξιολόγους διαιρέσεις, μάλιστα ἐν κεφαλῇ, ὀστέα διακεκομμένα, χόνδρους, ἡπατικούς, σπληνικούς, αἷμα ἀνάγοντας, πρὸς τε κυνόδηκτα, ἄνθρωποδήκτα, κολποὺς for considerable injury, especially in the head, bone fissures, cartilage, liver diseases, splenic, outgoing blood; also for (wounds) caused by a dog bite, human bite, fistulous ulcers.

After the therapeutic applications, he documents the types of single drugs and their quantities:

Κηροῦ, πίσσης ξηρᾶς, ἀσφάλτου, πιτυίνης ἀνὰ <α>, μάννης <ϛ>, ψιμυθίου, χαλκάνθου ἀνὰ <δ>, ὀποπάνακος <β>, ἐλαίου <ε>, ὀξου <β>.


While he devotes the final part of his prescription to writing the instructions for the preparation of the plaster:

tὰ τηκτὰ τῆξας ἐπάρας τε ἀπὸ τοῦ πυρὸς ἐνσταζε τὸν χάλκανθον διειμένον ὄξει καὶ ἐπιστήσας ἐπάρας πάλιν ἐπίβαλε τὸ ψιμύθιον λελειωμένον ὄξει καὶ πάλιν ἐπιστήσε, ἕως ψυγῇ, καὶ χρῶ Instill the dissolved copper sulfate in vinegar after melting and stirring the soluble ones in the fire and boiling; after stirring again, add the white lead, emulsified with vinegar and boil again and, finally, [add] the powder of frankincense and opopanax hispidus; cool (until) dawn, and use.

Oribasius then mentions a prescription similar to those by Galen, called “plaster for bleeding wounds” (Βάρβαρος ἔναιμος). However, Oribasius does not incorporate litharge and replaces verdigris with copper sulfate, present in Galen’s μέλαινα έμπλαστρος. The remaining drugs from Oribasius’ Βάρβαρος ἔναιμος remain unchanged in relation to Galen’s formulation, totaling ten drugs.

In Iatricorum liber XV, 14, 20–46 (ed. Zervos, p. 7–138) by Aetius, on the other hand, mention is made of a prescription called “Barbaros Cappadocian Hera”, which they simply call “plaster” (Ἡρᾶ Καππάδοκος βάρβαρος, ἧντινες ἄφραν καλοῦσιν), and it is stated that it is a “melaine plasters” (Μέλαινα έμπλαστρος). Aetius recommends using this prescription:

πρὸς τὰς ἀξιολόγους διαθέσεις καὶ μάλιστα πρὸς τὰς ἐν τῇ κεφαλῇ, πρὸς σύριγγας, κόλπους, κατάγματα ἀφλέγμάντως κολλώσα, […] ἐπὶ νεύρων καὶ χόνδρων διακεκομμένων καὶ ὀστῶν· ποιεῖ πρὸς ὑποφορὰς, κόλπους κολλὰ μεγάλους καὶ ἐπὶ τῶν ἀναστήματων διελώσα, […] καὶ ἔστι γὰρ καθόλου ἀφλέγμαντος […] δὲ καὶ ἐναμοίς καλλιστή καὶ ἐπὶ τῶν ᾠρίων ἀναγόντων. Ἐμπλάσας εἰς δέρματα δύο, ἓν μὲν ἐπὶ τὸ στῆθος καὶ τὰς πλευρὰς ἐπιτίθει, ἄφραν δὲ ἐπὶ τὸ μετάφρενον, παραδόξω γὰρ ἐπέχει τὸ αἷμα· ποιεῖ καὶ πρὸς κυνοδήκτους καὶ ἀνθρωποδήκτους· ἔστι γὰρ καθόλου ἀφλέγμαντος […]

for important conditions and especially for those in the head, for fistulous abscess, fistulous ulcer, fracture united free from inflammation, […] for tendons, broken cartilage and bones, for drainage, large fractures that joins quickly united, divided abscesses, and fluid removed […] [affections] liver and splenic […] especially [for wounds] with blood and outgoing blood. It is plastered on two parts of the skin, one is applied on the chest and [area of] the ribs, another on the back, it is applied in the opposite direction to the outgoing blood […] also for bites caused by a dog and by a human and, in general, it is anti-inflammatory […]

He immediately lists the drugs in the compound, without further information regarding quantities, except for some particular drugs:

Κηροῦ, πίσσης, ἀσφάλτου, πιτυίνης, ἀνὰ λίτραν ἕξ, ψιμμυθίου, χαλκάνθου ἕξ, ἐλαίου, δέξου, ἐνα λίτ. α· 1 litra of wax, pitch, bitumen, pine resin, 6 unciae of powder of frankincense, white lead, 4 unciae of copper sulfate, 2 unciae of opopanax, oil (olive), vinegar, 1 litra.

At the same time, he indicates a long and careful elaboration process, which combines the different substances previously dosed:
Placing the oil and vinegar in a new pot dissolves the finely cut wax and bitumen, a bit of reserved vinegar, to stir; the melted pitch is placed, finely chopped; after dissolving them, filter and boil again; When it is half-boiling, put the pot on the fire, gradually place emulsified copper sulfate with a little vinegar, so that it does not boil (to a boil), and boil again over a very low heat; taking care that it does not stick, putting the pot on the fire, place crushed opopanax with the remaining vinegar; then sprinkle with dry white lead and powder of frankincense; once warm, as unified, the opopanax and the stored powder of frankincense that does not stick, put it into a mortar, and let it dry, softly melting, store and use, as prescribed […] all wounds prevail, as experience show. It opens after seven days in winter, three days in summer.

From the name of plaster appearing in Iatricorum liber XV, 14, we can deduce that it would probably be the most popular plaster of the 6th century CE, due to the large number of therapeutic applications that its use covers. In comparison with the prescriptions by Galen and Oribasius, the qualitative formulation of the “Barbaros Cappadocian Hera” (Ἡρᾶ Καππάδοκος βάρβαρος) is identical to that of Oribasius.

Finally, in Epitomae medicae libri septem, 7, 17 (ed. Heiberg, 7.358) by Paul, there is a section about medical formulations “On plasters, and things to be added to the boiling, from the works of Antilus, and on the proportion of wax to oil” (Περὶ ἐμπλάστρων καὶ ἐμβαλλομένων εἰς τὰς ἐψήσεις αὐτῶν, ἐκ τῶν Ἀντύλλου- καὶ περὶ συμμετρίας κηροῦ πρὸς ἔλαιον, 7, 17, t1), intended for the treatment of various conditions. According to Paul, some of these plasters are for wounds and are called plasters for bleeding [wounds], binders and fracture plasters, which must be composed of desiccants (αὐτῶν δὲ τῶν ἐμπλάστρων αἱ μὲν εἰσὶ τραυματικαί, ἀς ἐναίμους τε καὶ κολλητικάς καὶ καταγματικάς καλούμεν, διὰ τῶν ἔμπραινόν). These desiccants are willow, oak, cypress, pine bark and pitch, myrrh, rosemary, bitumen, aloe, motherwort, vine wood ashes, ceruse, litharge and most metals82.

82 Epitomae medicae libri septem, 7, 17, Paul advises boiling such desiccants until they do not stain. He claims that healing plasters are also made up of desiccants, but more than binders. Such are burnt copper, aeris and ferri scale, verdigris, calcitis, burnt copper flower, alum, gall, molybdenum, calamine, pumice, and shells. Regarding the discutients, he affirms that they are formed from heating.
He also maintains that it is necessary to apply the plasters for bleeding [wounds] when the injuries or fractures are recent, and to open after three days (λέειν τε διὰ τρίτης, 7, 17, 1). Among the plasters with these characteristics, Paul includes the “plaster for bleeding wounds, which is prescribed for fractured bones” (Βαρβάρα ἔναιμος- καὶ πώρους καταγμάτων δείκνυσιν, 7, 17, 42), naming the plaster as Oribasius does, although he does not elaborate on its etiology. He only specifies its most important application, “for fractured bones” (πώρους καταγμάτων δείκνυσιν), the drugs in the prescription and their quantities:

.AddWithValues

\[\text{1 litra of judaicum bitumen, solid pitch, wax, pine resin, 2 of terebith, 1 of litharge, 1 of white lead, 2 of powder of frankincense, 2 of opopanax, 2 of myrrh, 3 of oil (olive), whatever is strictly necessary to vinegar.}\]

In addition, Paul does not provide further instructions for preparing the prescription, apart from the recommendation that a sparing amount of vinegar should be used during the process. With respect to the formulation, he is the only Greek physician analyzed in our study who counts twelve medicines in total. Of these, Paul resumes the use of litharge from Galen’s formulation and, as the other Greek authors do, uses white lead and hydrocarbons (pitch and bitumen), discarded by the Syriac prescription. Finally, we observed that Paul incorporates drugs, such as myrrh (which also appears in the Galenic and Syriac plasters) and terebith, but does not add verdigris or copper sulfate. Summarizing, of the fourteen drugs described in the Apostles’ Ointment, seven match the last Greek recipes described.

**Conclusion**

The “Apostles’ Ointment” from *The Book of Medicines* is the Syriac version of a compound medicine of Greek origin, possibly Christianized by Syriac physicians. While it is difficult to determine the Greek antecedents of the Syriac
prescription, and even more so the origin of the name given by the Syriac physi-
cians to the Greek ointment, our analysis of the prescriptions by Galen, Oribasius,
Aetius and Paul gave us evidences that any of them or all could constitute the
sources of the Apostles’ Ointment, and then the author of this Syriac recipe felt free
to modify it when mix different drugs from different sources. Another clue about
the origin of this recipe could be in the content of the Syriac translation of De com-
positione medicamentorum per genera, which unfortunately is not preserved83.


MS BL Add 14661.

Oribasii Collectionum medicarum reliquiae, libri XLIX–L, libri incerti, eclogae medicamentorum, ed. J. Raeder, Leipzig–Berlin 1933 [= Corpus Medicorum Graecorum, 6.2.22].


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