

Veterinary Medicine in Byzantine Egypt

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Abstract: In order for humans to make the best use of their animals, they must provide these animals with equipment that helps them meet the purpose for which they are used and ensures optimal use of them in all aspects. The human beings are also entrusted with another responsibility towards their animals, which is to provide them with the necessary health care, as soon as they suffer from illness or injury, out of concern for their safety, and so that people continue to benefit from their animals for as long as possible. The present research paper is concerned with discussing the most important therapeutic methods that members of the Egyptian society during the Byzantine period have relied on to treat their animals from diseases and injuries. And in treatment of the research topic, the researcher followed the analytical method based on displaying texts and information provided by historical sources and analyzing them in order to get out the best possible outputs and results, and the researcher also took advantage of the recent studies that touched on some aspects of the research topic. At the conclusion of the research, the researcher was keen to present the most important results that he reached through his study of the subject, as well as displaying his analytical vision of the elements that were included in the research.

Key Words: Animals; Treatment; Medicine; Pharmacology; History

الطب البيطري في مصر في العصر البيزنطي

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الملخص: ليحقق الإنسان أفضل استفادة من دابته، يجب عليه تزويدها بعدة تعينها على تلبية الغرض المستعملة من أجله، وتكفل التسخير الأمثل لها من كافة النواحي. كما يُنَاط بالإنسان مسؤولية أخرى نحو الدابة، تتمثل في توفير الرعاية الصحية اللازمة لها، حالما تعثرها علة أو إصابة، حرصاً منه على سلامتها، ولكي يستمر انتفاعه بها لأطول وقت ممكن. وتهتم الورقة البحثية الراهنة بمناقشة أهم الوسائل العلاجية التي عول عليها أفراد المجتمع المصري إبان العصر البيزنطي في مداواة دوابهم من الأمراض والإصابات. وقد اتبع الباحث في معالجته لموضوع البحث المنهج التحليلي القائم على عرض النصوص والمعلومات التي تقدمها المصادر التاريخية وتحليلها بغية الخروج منها بأفضل تخريجات ونتائج ممكنة، كما أفاد الباحث أيضاً من الدراسات الحديثة التي تطرقت إلى بعض جوانب موضوع البحث. وفي ختام البحث حرص الباحث على تقديم أهم النتائج التي توصل إليها من خلال دراسته للموضوع، عارضاً رؤيته التحليلية للعناصر التي اشتمل عليها البحث.

الكلمات الدالة: تاريخ؛ طب؛ بيطرة؛ علاج؛ الحيوان.

‘Perhaps the actual tasks performed by the veterinarians seem rather sordid, but nevertheless a knowledge of veterinary medicine is appropriate not only for members of the upper classes, but even for the most eloquent of men, so that if their animals are treated with foresight and shrewd direction, they may avoid financial loss and enjoy the pleasures to be derived therefrom *forte opera ipsa mulomedicorum uidetur abiector, notitia autem curationis non solum honestissimis, sed etiam disertissimis conuenit, ut prouisione et ordinatione sollerti curatis animalibus et damnis careant et uoluptatibus perfruantur*’ “Vegetius, AD 4c”.¹

A great deal of evidence proves Egyptian society’s high level of knowledge of veterinary medicine since very ancient times. The pharaonic period has, for instance, left one of the most famous medical papyri, the Kahun papyrus, containing a number of veterinary recipes. This was found in a worn-out condition near Lahoun village in the Fayoum in 1889, and from then on it has been kept in the collection of University College of London. It dates back to around 1900 BC. The text is divided into two parts; the first is written in hieratic, like most Pharaonic medical papyri, and is focussed on gynaecology. The second part of the same papyrus is written in hieroglyphics, which were traditionally used in religious writings, and is focussed on the treatment of animal diseases.²

Pharaonic Egypt also possessed skilled veterinarians in the treatment of various animals and poultry, who used the latest methods of treatment.³ In both Ptolemaic and Roman periods there is evidence of the presence of these veterinarians, as well as various documents testifying to their presence in the period under study here.⁴

¹ P. *Vegeii Renati Digestorum Artis Mulomedicinae Libri*, ed. Ernestus Lommatzsch (Leipzig: In aedibus B.G. Teubneri, 1903), Liber I, prol. 13, 14-15.

² John Francis Nunn, *Ancient Egyptian medicine* (Norman: University of Oklahoma Press, 1996), 34-5. Of the prescriptions written in the veterinary part of the *Kahun papyrus*; a prescription for treating the eyes of the bull which suffers from wind (cold?), see Francis Llewellyn Griffith, ed., *Hieratic Papyri from Kahun and Gurob* (London: Bernard Quaritch, 1898), *Kahun* LV.2, Pl. VII, Prescription II, ll. 34-56, 13. For a prescription for treating a dog infected with worms, in addition to another therapeutic prescription for treating a bull with (*ushau?*) in its eyes in winter, see Prescription I, ll. 17-33; Prescription III, ll. 57-69, 13-14.

³ John Gardner Wilkinson, *The manners and customs of the ancient Egyptians*, vol. 2 (London-New York: John Murray, 1878), 453; Kate Kelly, *The History of Medicine: Early civilizations: prehistoric times to 500 C.E.* (New York: Facts on File, 2009), 30. One of the most famous veterinarians in Pharaonic Egypt; the doctor "*Win - Nefer*" (5th dynasty) who was inspector of the doctors and a priest specialized in the examination of animal sacrifices, and the doctor "*Iri*" (6th dynasty) who served as the chief of doctors working in the royal court, and was also responsible for examining the animals prepared for sacrifices to verify absence of diseases, and the doctor "*Nekht*" (Middle Kingdom) who was responsible for inspecting the health status of animals prepared for human use. It is worth noting that the priests of the goddess "*Sekhmet*" have formed the oldest association of veterinary doctors and surgeons throughout history. See Ashraf Sobhi Mohammed Saber, *Tabsira Bitarikh al-Baytara*, 1st ed. (Cairo: Asila for Design and Publishing, 2006), 138, 146-7.

⁴ See for example *P.Hib.* I 45 (257 BC, Oxyrhynchus), Verso, l. 21: ‘καὶ ἰππιατρικόν.’ Rostovtzeff also shed light on the papyrus document (*PSI* IV 371), which dates to (ca. 250 BC) in Philadelphia, and includes a reference to the receipt of stablemen some payments in kind, as well as their receipt of a measure of wheat for paying the tax allocated to provide salaries of the veterinarians. See Michael Rostovtzeff, *A Large Estate in Egypt in the Third Century B. C.: A study in Economic History* (Madison: University of Wisconsin, 1922), 111. From her side, Draycott confirms with documentary evidence that the priests of the goddess "*Sekhmet*" have continued to practice medicine, in addition to examining the

Veterinarians usually carried the title: "ἵππίατρος," or "ἵπποῖατρος," or "ἵππικός ἰατρός," or similar titles that literally mean "horse doctor". However, Johnson and West, with whom the present author agrees, suggest that such titles were applied to general practitioners of animal medicine, not only specialists in horse medicine.¹ Several examples of Byzantine-era documents confirm the presence of this category of doctors, and are summarised here as a precursor to discussion:-

1- A papyrus from Oxyrhynchos dating back to the fourth century AD (*ca.* 335), contains a payment order directed by a person named Aphthonius to another person named Ophellius. The latter was to pay ten jars of new wine for services provided to the home of the land-owner, as well as another jar of new wine to a veterinarian named Amesystos, so that the total account would be eleven jars: 'π(αρά) Ἀφθονίου Ὀφελλίω Ὠχίν χ(αίρειν) παράσχες εἰς ὑπηρεσίαν τῆς γεουχ(ικῆς) οἰκίας οἴνου νέου κεράμια δέκα καὶ Ἀμεσύστῳ ἵπποιατρῶ ἐκ διαταγ(ῆς) οἴνου κεράμιον ἓν γέρον γί(νονται) κ(εράμια) ια'.²

2- An ostrakon from Oxyrhynchos dating back to the fourth century AD, contains a payment order that includes the following: 'Cyriacus to Theon, greeting. Give Thonius, the veterinarian, six measures of wine, = 6 (cnidia), daily from Choiak 27 to Tybi 2. Cyriacus Κυριακὸς Θε(ωνίω) χ(αίρειν). δὸς Θωνίῳ ἵπποῖατρῶ οἴνου ἀπὸ Χοιάκ κ(ῆμερουσίως) ἕως Τῦβι β κνίδια ἕξ, γ(ίνονται) ζ. Κυριακός'.³

animal sacrifices, as professional veterinarians for at least the second century BC, and perhaps during the Roman period as well. See Jane Louise Draycott, "Approaches to healing in Roman Egypt" (Ph. D. diss., University of Nottingham, 2011), 262. And of the evidence for veterinarians in Roman Egypt, there is an inscription found near a disused quarry at Wadi Fakhari in Upper Egypt and provisionally dated to either the first or second century AD, recorded an act of worship undertaken by a member of a cavalry detachment who was also a veterinarian called Longinus: 'Τὸ προσκύνημα Λογγίνου ἵππέ[ω]ς καὶ τοῦ ἵππ[ικοῦ] ἱατ[ροῦ].'. See Évelyne Samama, *Les médecins dans le monde grec: sources épigraphiques sur la naissance d'un corps médical* (Genève: Librairie Droz, 2003), *IGRR* I 1252/ *CIG* 4716 d, 483; Draycott, "Approaches to healing," 69. Also there is the ostrakon (*O.Florida* 15) from Apollonopolis Magna in the middle or end of the second century AD, which contains a letter that reads (ll. 1-9) as follows: 'Publius to A - - - os his son many greetings and in everything good health, with your horse whom the evil eye does not touch. I sent you via Quintus, the veterinarian, the andromax and the boiled wood-bird, since there is no meat for sale. If you have need of copper, you will write to me and I will send it to you with whatever safe man I may find. I pray for your health with your horse who is safe from the evil eye Πούπλις Α[. . .]ω[ι] τῶι υἱῶι πλείστα χ(αίρειν) καὶ διὰ παντὸς ὑγιαίν[ει]ν μετὰ τοῦ ἀβασκάντου σου ἵππου. ἔπεμμά σοι διὰ Κουίντου ἵπποιατροῦ τὸν ἀνδρόμαχα καὶ τὴν ὄρνειθαν ὑλῆαν ἠψημένην ἐπεὶ οὐκ ἔνει κρέας πολούμενον. ἐὰν χρῆζεις χαλκοῦ . . . γράψεις μοι καὶ πέμψω σοι μετὰ οὗ ἐὰν εὔρω ἀνθρώπου ἀσφαλοῦς. ἐρρῶσθαί σε εὔχομαι μετὰ τοῦ ἀβασκάντου σου ἵππου'. See also *SB* XX 14584 (*ca.* AD 250, Ptolemais Euergetis), l. 18: '[ἔστ(ιν)] . . . ὁ ἐν οἰκί]δίῳ τοῦ ἵπποῖατροῦ'; *IGRR* I 1373 (30 BC – AD 284, Hieria Sykaminos), l. 5: 'Γάϊος Αὐφίδιος [ἵ]πποῖατρος {ἵπποῖατρος}'.

¹ Allan Chester Johnson, and Louis Caulton West, *Byzantine Egypt: Economic Studies* (Amsterdam: Adolf M. Hakkert, 1967), 210-11.

² *P.Oxy.* I 92, ll. 1-3. Brill guesses that the wine jar ordered to be paid to the veterinarian may have been paid to him for his work with the animals of the land-owner, taking into account the small amount of this wage to the extent that it seems a fee paid to the veterinarian for a certain task rather than a regular salary to a veterinarian. See Lindsey Nicole Elizabeth Brill, "Ubiquitous Mulomedici: The social, economic, and agronomic significance of the veterinarian to the Roman world" (M. A. diss., University of Victoria, 2011), 181.

³ *O.Ashm.Shelt.* 83, ll. 1-5. The same veterinarian is repeated in two other documents; the first is the ostrakon (*O.Ashm.Shelt.* 131) which dates to the fourth century AD in Oxyrhynchos, and contains a payment order that reads (ll. 1-4) as follows: 'Cyriacus to Theon, greeting. Give Thonius, the veterinarian, two measures of wine, 2 cnidia. (date?). Cyriacus [Κυριακός] Θε(ωνίω) χ(αίρειν). [δὸς Θω]νίῳ

3- A papyrus contains an account list edited on June 10, AD 391. The list includes some of the wages in kind to be paid to employers of different professions, for their work in one of the estates of Hermopolis. In that list there is a reference to a payment of 4 *artabae* of wheat allocated to a veterinarian named Isidoros: ‘*Ἰσιδώρω ἱπποιάτρῳ ... σίτ(ου) (ἀρτάβαι) δ.*’¹ The low wage of the veterinarian, when compared with wages allocated to other professions in the same list, should be noted; for example, there is a reference to the allocation of 22 *artabae* of wheat to a donkey driver named Hatretis: ‘*Ἄτρητι ὀνηλάτῃ ... σίτ(ου) (ἀρτάβαι) κβ,*’ and a wage of 10 *artabae* of wheat was allocated to a physician named Heraklammon: ‘*Ἡρακλάμμωνι ἱατρῷ ... σίτ(ου) (ἀρτάβαι) ι,*’ and a wage of 8 *artabae* of wheat was allocated to a porter named Sias: ‘*Σιά ἑθρορῶ ... σίτ(ου) (ἀρτάβαι) η,*’ and a wage of 16 *artabae* of wheat was allocated to a goatherd named Prenis: ‘*Πρήνι αἰγῶν βοσκῶ ... σίτ(ου) (ἀρτάβαι) ις,*’ while the veterinarian was only equal in his wage to a sack-weaver named Stephanus: ‘*Στεφάνῳ σά[κ]κων ῥάπτῃ ... σίτ(ου) (ἀρτάβαι) δ.*’²

Thus, the last document shows clearly the low profitability of the work in veterinary medicine in comparison to other professions.³ On the other hand, this document could

ἱπποιάτρῳ οἴνου κνίδ]ια δύο, κνίδ(ια) β. [. . . Κ]υριακός.’ While the second document is the ostrakon (O.Ashm.Shelt. 144) which dates to the fourth century AD in Oxyrhynchus as well, and contains also a payment order that reads (ll. 1-5) as follows: ‘Cyracus to Theon, caretaker, greeting. Give Thonius, the veterinarian, five jars of wine, 5 jars, from Mecheir 26 to 30. Cyracus *Κυρακός Θεῶνι προνο(ητῆ) χ(αίρειν). δὸς Θωνίῳ ἱπποιάτρῳ οἴνου κεράμια πέντε, κερ(άμια) ε, ἀπὸ Μεχειρ κς ἕως λ. Κυρακός.*’ Brill surmises that the veterinarian Thonius was a regular worker in the public arena of Oxyrhynchus, and he must have been paid in kind periodically by the official employees of the arena, for the medical care he gave to the horses participating in performances and games. See Brill, “Ubiquitous Mulomedici,” 130-2. Brill can be supported by the papyrus document (SB XIV 12059) which dates to the third or fourth century AD, and contains a list of permanent workers in the race arenas, including veterinarians where the following professions are listed in the text of the document (ll. 3-8), as follows: ‘charioteers [. . .], starters [. . .], masseurs and [. . .], veterinarians . . .], stablemen, (people who pour?) [. . .] *ἡνίοχοι . [. . .] ἀφεται . [. . .] ἀλίπται κ[α]ἰ [. . .] ἱππίατροι . . .] ἱπποκόμοι . . .] προσχύται . . .]’*

¹ P.Ross.Georg. V 60, Verso, Col. I, l. 4.

² P.Ross.Georg. V 60, Verso, Col. I, ll. 2, 3, 5, 11, 10 in order.

³ James Noel Adams explained that it is wrong to assume that there is any resemblance between veterinary medicine in the ancient world and its counterpart in the present time, as in ancient history there were no specialized veterinary schools in the known sense of nowadays, also the veterinary medicine profession was then considered a despicable occupation, and its practitioners had a modest and humiliating rank in general. See James Noel Adams, *Pelagonius and Latin Veterinary Terminology in the Roman Empire* (Leiden-New York-Köln: Brill, 1995), 66. What James Adams declared strongly agrees with what was reported by the fourth-century writer, Vegetius, in the prologue of the first book of his famous treatise on horse medicine “*Mulomedicina*,” where he pointed out that the profession lacked prestige, and was therefore practiced by humbled people of the lower classes. See *Vegetii Digestorum Artis Mulomedicinae*, Liber I, prol. 2, 12: ‘*sed quod minus dignitatis uidebatur habere professio ... ideo a minus splendidis exercitata.*’ Also Vegetius opened the second book of his treatise, pointing out that the veterinary medicine profession has collapsed since a long time, and this was because of greed and low reward which made no one interested to devote himself to the study necessary to learn its principles. See Liber II, prol. 1, 95: ‘*Mulomedicinae ars iam dudum vitio cupiditatis et exiguitate mercedis nullo studiosius discente collapsa est.*’ Perhaps it should be noted in this context that the decree of prices issued in AD 301 under the reign of Emperor Diocletian (AD 284 – 305) contained two items related to the fees of the veterinarian for certain tasks. One of them provides that the veterinarian be given a fee not exceeding 6 *denarii* for shearing and caring of the hooves of each animal: ‘*Mulomedici tonsurae et aptaturae pedum in capite uno — sex.*’ While the other item provides that the veterinarian be given a maximum fee of 20 *denarii* for combing and cleansing the head of each animal: ‘*Deplecorae (Deplexurae/ Deplicaturae?) et purgaturae capitis per singula capita — viginti.*’ See William Martin Leake, ed., *An Edict of Diocletian fixing a maximum of prices throughout the Roman Empire, A.D. 303* (London: John Murray, 1826), *Ed. Diocl.* 7.20-1, 20, 35-6.

itself be considered clear evidence that the Greek terms: "*ἵππίατρος/ ἵπποῖατρος/ ἵππικός ἰατρός/*" are not confined in their meaning to "horse doctor" only, as previously noted, on the base that the veterinarian called Isidoros was mentioned in a same list with a "donkey driver" and a "goatherd," as well as some camel drivers (*τοῖς καμηλαρ[ί]οις (?) . . .]*) elsewhere in the document,¹ with no mention of horses or those who work with them anywhere in the document. This may suggest that the services of Isidoros had been provided to the various animals of the estate, which did not appear to include horses.

4- A papyrus contains a contract written in Oxyrhynchos on May 2, AD 619, and reads as follows: 'Aurelius Jeremiah son of Joseph, mother Thaesis, from the hamlet of Panguleeiu of the Oxyrhynchite nome with as guarantor to me, Stephanus, administrator, son of the late Menas, to Aurelius Epiphanius, the veterinarian, son of Phoebammon, from the city of Oxyrhynchos. I acknowledge that I have received from you just now eight gold *solidi* on the private standard as the price agreeable to me in full of eight hundred five-*sextarii* jars of wine *Ἀυρήλιος Ἰερημίας υἱὸς Ἰωσήφ μητρὸς Θαησίης ἀπὸ ἐποικίου Παγγουλείου τοῦ Ὀξ(υρρυ)χ(ίτου) νομοῦ μετ' ἐγγυητοῦ ἐμοῦ Στεφάνου προνητοῦ, υἱοῦ τοῦ μακαρίου Μηνᾶ, Ἀυρηλίῳ Ἐπιφανίῳ ἵπποῖατροῦ υἱῷ Φοιβάμμονος ἀπὸ τῆς Ὀξ(υρρυ)χ(ιτῶν) πόλεως. ὁμολογῶ ἐσχηκέναι παρὰ σοῦ ἐντεῦθεν\ ἤδη χρυσοῦ νομισμάτια ὀκτώ ἰδιωτικῶ ζυγῶ εἰς τὴν συναρέσασάν μοι τιμὴν πλήρης οἴνου πενταξεστιαίω(ν)/ σηκωμάτων ὀκτακροσίων.*²

Although there is, therefore, documentary evidence that confirms the existence of veterinarians in Egyptian society during the period under study, unfortunately there is no evidence to get closer to those veterinarians and know the nature of their work or

¹ *P.Ross.Georg.* V 60, Verso, Col. II, l. 17.

² *P.Oxy.* LXI 4132, ll. 8-21. Also there is the papyrus document (*P.Oxy.* XVI 1974) Which contains an acknowledgement of a debt written in Oxyrhynchos on April 27, AD 538, in which the villager Aurelius Anoup, son of John and Martha, from the hamlet of Alkome of the Oxyrhynchite nome, acknowledges that he owes to the veterinarian Aurelius Pamouthius, son of Sarapa, from the city of Oxyrhynchos. The reason for the debt is that the veterinarian had received from the villager a quantity of wine based on a previous contract already concluded between them. However, the contracted wine decayed before the time agreed upon in the contract, and therefore the villager had to pay the veterinarian 1 1/2 gold *solidi* on the private standard as a compensation, so that the villager pledged at the end of the acknowledgement that he would commit to pay his debt during the month of Hathur (Recto & Verso, ll. 4-19): '*Ἀυρήλιος Ἀνοῦπ υἱὸς Ἰωάννου μητρὸς Μάρθας ἀπὸ ἐποικίου Ἀλκῶμε τοῦ Ὀξυρρυχιτ[ο]υ νομοῦ Ἀυρηλίῳ Παμουθίῳ υἱοῦ Σαραπᾶ ἵπποῖατροῦ ἀπὸ τῆς Ὀξυρρυχιτῶν πόλεως χαίρειν. ὁμολογῶ ὀφείλειν σοι καὶ χρεωστεῖν ὑπὲρ ὄζων ἐκ τοῦ δοθέντος σοι παρ' ἐμοῦ οἴνου ἐπὶ τῆς ῥύσεως τῆς παρελθούσης πρώτης ἰνδ[ι]κτιον[ος] κατὰ τὰ μεταξὺ δόξαντα σύμφωνα χρυσοῦ νομισμάτιον ἐν ἡμῶσι ἰδιωτικῶ ζυγῶ, γί(νεται) χρ(υσοῦ) νο(μισμάτιον) α □ ἰδιωτι(κῶ) ζυγ(ῶ), κεφαλ(αίου), κ[αί] τοῦτο ὁμολογῶ [ἀποδοῦνα]ί [σ]ο[ι] ἐν τῷ Ἀθῆρ μηνί. † γρ(αμμάτιον) Ἀν[οῦ]π [υ]ί[ο]υ Ἰωάν[ο]υ . [.] . . [.] . '* For further documents of the Byzantine period, that included the reference to the veterinarian with one of the terms previously presented, see *P.Lips.* I 101 (ca. AD 300-325, Hermopolis), Col. II, l. 23: "*Ἀντινόου Φιλαντινοῦ ἀνδρὸς ἵπποῖατροῦ ἰδ(ιω)τικῆς ἐ[σπ(αρμένης)] (ἄρουραι) β*"; *CPR* VII 38 (fourth century AD, unprovenanced), l. 3: "*Φαρμουῦθι Σαμβαθίῳ ἵπποῖατροῦ [. .]*". See also *PSI* VIII 955 (sixth century AD, Oxyrhynchos); Ofelia Nanetti, "ἸΠΠΙΑΤΡΟΙ," *Aegyptus* 22, no. 1-2 (January – June 1942): 49-54; T. Gagos, and M. W. Haslam, and N. Lewis, eds., *The Oxyrhynchus Papyri*, vol. LXI (Nos. 4093-4132) (London: Egypt Exploration Society, 1995), 140.

even the study and training they received to be qualified enough to specialize in that branch of medicine.¹

In an attempt to pierce this ambiguity surrounding veterinarians in the Byzantine world in general, Anne MacCabe drew attention to the Byzantine emperors' interest in the profession of veterinary medicine, and their encouragement to its practitioners through a number of imperial decrees and legislation that singled out veterinarians. For example, in the decree of prices issued by Emperor Diocletian in AD 301, the fees of veterinarians for certain tasks are explicitly mentioned.² Also the imperial legislation issued in AD 337 under the name of Emperor Constantine I (AD 306 – 337), declared the equality between human and veterinary physicians and the practitioners of a number of other professions with respect to the right of exemption from obligatory public services, in order to give them enough time to excel in their profession and pass it on to their inheritors. There is another law dating back to AD 370, ensuring the veterinarians who were working for the animals of the public mail the right to food and clothing at the expense of the state. It is not surprising at all that the state gave such attention to veterinarians, because it needed them in three of the most important sectors of the empire: the army, mail, and public race arenas. Particularly the vital role of horses in those three sectors must have motivated the interest of the Byzantine Empire in collecting a great number of scientific texts in the Encyclopedia of *Hippiatrica*, which included a vast number of different scientific treatises on horse medicine left by the greatest veterinarians over many centuries.³

Citing some texts of the *Hippiatrica*, Lindsey Brill concluded that the veterinarian in the Byzantine world had to gain a certain degree of knowledge of human medicine,⁴ in addition to a considerable amount of knowledge of agronomy,⁵ then he had to acquire

¹ About this problem, see Usama Fayez Istiqlal, "Medicine and Methods of Treatment in Byzantine Egypt (AD 284 – 642)" (M. A. diss. (in Arabic), Ain Shams University, 2016), 177.

² See p.4, n. 4 above.

³ Anne MacCabe, *A Byzantine Encyclopedia of Horse Medicine: The Sources, Compilation, and Transmission of the Hippiatrica* (Oxford: Oxford University Press, 2007), introd. 1-17, esp. 6-9, 12-13. The dates of the treatises included in the *Hippiatrica* range from the fifth century BC to the tenth century AD, and for a long time it was agreed that this Byzantine Encyclopedia was collected during the reign of Constantine VII Porphyrogenitus (AD 945-959), however, this date is currently controversial among many researchers. The core of the *Hippiatrica* lies down in the passages of seven veterinarians all belonging to late antiquity: *Eumelus*, *Apsyrtus*, *Theomnestus*, *Hierocles*, *Hippocrates*, *Pelagonius*, and *Anatolius*. See Anne-Marie Doyen-Higuet, "The *Hippiatrica* and Byzantine Veterinary Medicine," *Dumbarton Oaks Papers* 38 (1984): 111-20. And about the *Hippiatrica*, see also Saber, *Tabsira Bitarikh al-Baytara*, 99-100.

⁴ The *Hippiatrica* includes a letter concerning belly wounds from Apsyrtus (AD 3 – 4c) to a military commander (*Centurion*), in which Apsyrtus wrote: 'It is necessary to suture the peritoneum, in the same manner as that used by doctors on a human-being *δεῖ γαστρορραφεῖν, ὄνερ τρόπον οἱ ἰατροὶ ἐν ἀνθρώποι.*' Further evidence of the knowledge of human medicine is indicated by *Apsyrtus*' frequent reference to a number of surgical instruments used with humans, using the same technical vocabulary commonly found in manuals of human medicine such as "dilator *διαστόλιον*" used in treating ear infections, "fibula *πόρπαξ*" used for the treatment of a dislocated shoulder, "forceps *σαρκολαβίς*" usually used in throat surgery, and many other instruments. See MacCabe, *A Byzantine Encyclopedia of Horse Medicine*, 144.

⁵ In a clear and repetitive manner, the texts of *Pelagonius* (AD 4c) included in the *Hippiatrica* were based on the works of one of the most prominent figures of agronomy; namely Columella. See MacCabe, *A Byzantine Encyclopedia of Horse Medicine*, 160ff.

proficiency in healing through direct contact with animals in farms and other locations, gaining knowledge and training from the theories and experiences of his predecessors, as well as his daily observations.¹ It is not exactly known, however, to what extent the findings from the texts of the *Hippiatrica*, to which Brill turned,² may be applied to veterinarians working in Egypt during the Byzantine period. The only meagre clue, is that four of the people addressed in the letters of one of the most celebrated composers of the *Hippiatrica*, namely *Apsyrus*, had Egyptian names: "Ὠρίων, Ἀπίων, Ἀμμώνιος, Μέμων".³

Accordingly, it seems difficult to distinguish the basics on which veterinary medicine relied in Egypt; were they scientific such as those found in many loci inside the Encyclopedia of Byzantine *Hippiatrica*? Or was Egyptian veterinary medicine based on practical experience inherited from generation to generation? Or did Egyptian society use in animal healing a mixture of both approaches? It might be possible to form a view on this issue by reviewing the few documents related to animal medicine, as follows:-

1- A papyrus from Arsinoe, dating back to the end of the third century or the beginning of the fourth century AD, contains an official list that reads as follows: 'List of animals to be treated with an emollient: from the *metropolis* through Chairemon: 18 animals; from the village of Straton: 10 animals,⁴ from the hamlets of Piabanes and of Loros: 10 animals; from the hamlet of Severus: 5 animals; from the hamlet of Touroubestis: 4 animals. In total, 53 animals⁵ *Βρένειον κτηνῶν μαλαγματισθῆναι πόλεως*

¹ In one of his passages in the *Hippiatrica*, *Theomnestus* (AD 4c) wrote the following case-history: "'*Tetanos*" occurs in horses and other beasts of burden from no other cause than cold when the solid [tissues] are afflicted and it undergoes a sympathetic affection of the sinews ... I learned this once when I happened to be at Carnuntum in Pannonia ... Then a horse of my own, one of the best, who was being ridden by a young servant, was seized by the "*tetanos*". This upset me very much, for nothing is better than a fine swift horse. This horse was Gaulish, eight years old, and unbeatable in galloping after stags. I really wanted to save that horse ... I will set forth the blend and proportions of this remedy, for with it you may treat any "*tetanos*" of a horse or other beast of burden, and chase away any chill, and heal those that are frozen—even if they are half-dead you may restore them to their natural state. No medicine more warming than this has ever been written down by a doctor or a horse-doctor, nor will one ever be written ὁ τέτανος τοῖς ἵπποις καὶ ἄλλοις ὑποζυγίοις οὐκ ἄλλως ἢ ἀπὸ ψύχους γίνεται ... τοῦτο δὲ ἔγνω ἐγὼ γενόμενος ἐπὶ ... ἡμέρας κατὰ Κάρνον τῆς Παννονίας ... ἵππος οὖν τότε ἐμὸς τῶν σπουδαίων, ἐφ' ᾧ νεανίσκος ἐλήφθη τῷ τετάνῳ. καὶ σφόδρα με τὸ πρᾶγμα ἐλύπει, οὐδὲν γὰρ ἵππου καλοῦ καὶ γοργοῦ προκριτέον. ἦν δὲ ὁ ἵππος Γαλλικὸς ἐτῶν ὀκτώ, τῷ δρόμῳ ἀκατάσχετος περὶ τοὺς ἐλάφους. σφόδρα οὖν ἐμέλησέ μοι σῶσαι τὸν ἵππον ... οὗ δὴ καὶ τὴν δύναμιν καὶ τὴν συσταθμίαν ἐκθήσομαι. ἐν δὲ τούτῳ θεραπεύσεις μὲν πάντα τὸ τετάνον ἵππων καὶ τῶν ἄλλων ὑποζυγίων, πάντα δὲ κρυμὸν ἀπελάσεις καὶ τοὺς κατεψυγμένους ἰάσῃ, καὶ ἡμιζήρους γεγονότας ἀποκαταστήσεις εἰς τὸ κατὰ φύσιν. καὶ ὅλως τούτουθερμότερον οὐδὲν οὐδὲν οὐδὲ ἰατρῶ οὐδὲ ἵπποῖατρῶ ἀνεγράφη φάρμακον οὐδὲ ἀναγραφῆσεται.' See MacCabe, *A Byzantine Encyclopedia of Horse Medicine*, 187-8.

² See Brill, "Ubiquitous Mulomedici," 43-54.

³ MacCabe, *A Byzantine Encyclopedia of Horse Medicine*, 132.

⁴ The linear traces in the document reveal that the number of animals recorded for the village of Straton was initially "6 ζ" or "16 ις," and then erased and modified to become "10 ι," and it is clear that this erasure was the reason why the writer of the list had mistaken the total number of the animals, and scored it as "53 νγ" instead of "47 μζ," probably calculating on the basis of the number erased and modified previously for the village of Straton, which makes the probability that the number was initially "16 ις" more closer to the truth.

⁵ *P.Oslo* inv. 1622, ll. 1-9.

δι(ὰ) Χαιρήμωνος κτήν(η) ιη Στράτονος κτή(νη) [[ς]] ι Πιαβάνεως κ(αί) Λώρου κτήν(η) ι Σευήρου κτήν(η) ε Τουρουβέστις κτήν(η) δ (γίνονται) κτήν(η) νγ.’ This document reveals that, with the knowledge of the governmental administration, a large group of animals (seemingly public transport animals)¹ will be treated using the "μάλαγμα," which is a medical embrocation or ointment with emollient effect, usually applied externally to relieve a wide variety of complaints, including inflammations, ulcers, superficial injuries, and muscular aches of the legs and the back. It is noteworthy that this ointment is referred to frequently in many veterinary recipes, included in the *Hippiatrica*.²

2- A papyrus from Oxyrhynchos dating back to the fourth century AD, contains a letter in which the following was written: ‘Isidorus to his son Demetrius, greeting. Give your brother Ammonianus the colt to be brought to me and the salt of ammonia, both the pounded and the unpounded, and the basil-seed, in order that I may doctor him away here, for I have been asked by my father Posidonius to stay for the collection during these five days; and send to me about anything you need. I pray for your lasting health *Ἰσίδωρος Δημητρίῳ υἱῶ χαίρειν. δὸς τῷ Ἀμμωνιανῶ τὸν πᾶλλον εἶνα ἐνεχθῆ μοι καὶ τὸ ἄλας τὸ ἀμμωνιακὸν τὸ τετριμένον καὶ τὸ ἄτριπτον καὶ τὸ σπέρμα τοῦ ὠκίμου εἶνα θεραπεύσω αὐτὸν ὧδε ἔξω, ἐπὶ γὰρ ἠξιώθην ὑπὸ τοῦ πατρός μου Ποσιδωνίου παραμεῖναι τῇ ἀπετήσῃ τὰς πέντε ἡμέρας ταύτας· καὶ πέμψον ἐμοὶ περὶ ἣ τινος χρέαν ἔχεται. ἐρῶσθαι ὑμᾶς εὔχομε πολλοῖς χρόνοις.*’³

Jane Louise Draycott considers this document clear evidence of the inheritance of Egyptian veterinary experiences across generations, perhaps without any scientific study. This is represented in the case of Isidoros, the sender of the letter, who was determined to self-medicate his own animal, using some simple natural materials such as ammonia and basil, with no need for costly medical drugs. The substances that Isidoros requested from his son have known medical benefits, in terms of their use as stimulants, diuretics, as well as for treating skin and stomach complaints and diarrhoea.⁴

¹ The document’s editor deduces that the animals referred to here are the "public donkeys *δημόσιοι ὄνοι*" specifically, on the basis of the frequent reference to these donkeys by the word "*κτηνῶν*" in a large number of documents and similar governmental records. See Anastasia Maravela-Solbakk, "Two Documents about Donkeys from the Collection of the Oslo University Library," *Zeitschrift für Papyrologie und Epigraphik* 149 (2004): 177-85, esp. 184, n. 1.

² MacCabe, *A Byzantine Encyclopedia of Horse Medicine*, introd. 8-9; Maravela-Solbakk, "Two Documents about Donkeys," 184-5, n. 2.

³ *P.Oxy.* IX 1222, ll. 1-5.

⁴ Draycott, "Approaches to healing," 155. James Adams, whom the present author strongly agrees with, pointed to the limited seeking of the Egyptian community members to the help of veterinarians, in order to avoid financial burdens, which motivated the vast majority of animal owners to manage themselves as much as possible when their animals were exposed to any disease or injury, using the simplest means on hand, and relying mainly on inherited experiences. This may explain to a large extent the lack of documentary evidence related to the nature of the work of veterinarians or even the therapeutic methods they utilised to treat animals in Egypt. See Adams, *Pelagonius and Latin Veterinary Terminology*, 100-1. The views of James Adams could be supported by the papyrus document (*P.Harr.* I 109), dated to the late third or early fourth century AD in Antinoopolis, and contains a letter in which a person wrote to his brother as follows (ll. 2-4): ‘Take care of my donkey, and if his condition improves and he can be disposed of, then sell him *τοῦ ὄνου μοῦ μελέτω σοί. καὶ ἐὰν μὲν εὐτραφ[έ]στερος γένηται καὶ δυνηθῆ πρα[θ]ῆναι, πώλησον.*’ It is clear that the donkey referred to in this document was in poor health, and on that condition it was kept by the brother of the letter sender who couldn’t do but urging his brother only to take care of the sick donkey until its condition improves, without having to call the veterinarian to examine the animal, on the contrary he asked his brother to sell it immediately after its recovery without hesitation, rather than keeping an animal damaged by disease, and might cause financial burdens in the future.

3- A papyrus contains a receipt issued in Oxyrhynchos on March 15, AD 552. The receipt shows that the banker Anastasius had paid 1 solidus less 4 carats as a price for the ointments needed for horses used in the public arena by the Green Team: ‘† ἐδόθη δι(ὰ) τοῦ λαμπροστάτου) Ἀναστασίου τραπεζίτου) ὑπὲρ τιμ(ῆς) μαλαγμάτων ἀγορασθ(έντων) εἰς χρεῖ(αν)τῶν ἰπ’πέων(?) τοῦ δημοσί(ου) κίρκου μέρ(ους) Πρασίνων ἐπὶ τῆς πεντεκαιδέκατης ἰνδ(ικτίονος) στρατηγί(ου) α νομισμάτιον ἐν παρὰ κεράτια τέσσαρα.’¹ Again, the reference to the utilisation of ointments (μαλάγματα) for the treatment of animals is repeated in this document.² In addition, the document reveals a price value that was not low for a veterinary drug needed by a group of horses used in the arenas, which may imply that the provision of medication necessary for animals may not have been possible for the vast majority of people in Egypt.

In light of the three documents presented, it is only possible to declare tentatively that there were two approaches to animal healing in Egypt during the Byzantine period. The first approach was to treat the animals with medical drugs, such as ointments, which appeared to be expensive, and this might be the reason why the governmental administration in Egypt was keen to supervise its own affairs with respect to providing such drugs for some animals, i.e. public transport animals or horses used in the public arenas, and also to prove that by means of official records and receipts. The second approach was to self-medicate the animals with cheap alternatives, and this seems to have been the most common way to avoid the financial burden of seeking the help of a professional veterinarian who might prescribe an expensive medication that exceeded the means of the animal-owner.

Conclusion

It is clear from the previous presentation that animals in Egypt during the Byzantine period did not lack the necessary medical care, in case of illness or injury, undoubtedly relying on the presence of professional veterinarians in Egypt since very ancient times, as well as the presence of two ways known to the members of the Egyptian society to heal the animal from its sickness; the first way was represented in using expensive drugs such as the ointments recommended frequently by the luminaries of veterinary medicine in the *Hippiatrica*, while the second way was represented in the resort of community members to alternative medicine which they inherited its arts and experiences over generations, relying on themselves and using simple elements from their environment, thus they avoided the services of professional veterinarians which they provided at a cost could not be afforded by the vast majority in Egypt.

¹ *P.Oxy.* I 145, ll. 1-3.

² For further documents including reference to the utilisation of ointments in the Roman and Byzantine periods, see *P.Ryl.* I 29 (a) (second century AD, unprovenanced), l. 27; Louise C. Youtie, “P. GRENF. I 52,” *The Bulletin of the American Society of Papyrologists* 16, no. 1-2 (1979): 149-51; *P.Laur.* III 84 (sixth or seventh century AD, Oasis «Parva?»).

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