Overview of Cuneiform Eye Disease Texts (Strahil V. Panayotov)

Cuneiform therapeutic prescriptions on eye disease form the largest surviving corpus of ophthalmology from the Ancient Near East, sharing numerous comparable features with medical practices from synchronic and diachronic neighbouring cultures. This volume is the first complete edition and commentary on Mesopotamian medicine from Nineveh dealing with diseases of the eye. This ancient work, languishing in the British Museum since the 19th century, is preserved on several large cuneiform manuscripts from the Royal Library of Ashurbanipal, from the 7th century BCE. In contrast to classical sources, the material edited in this volume derives from original manuscripts and not from later copies. Thus, the cuneiform texts in this volume are of utmost importance for the history of ancient medicine.

Eye disease texts written on cuneiform tablets are represented by therapeutic prescriptions and incantations, which are discovered mainly from the 1st millennium BCE. However, scattered vestiges of their forerunners are known from the 3rd and 2nd millennia BCE, showing that the textual production of the eye disease texts – most of which were edited in this volume – were transmitted, collected and edited over two millennia.

Important works from other scholars have to be briefly mentioned. The relevant Nineveh tablets from the British Museum were partially identified, copied and translated by the British scholar Reginald Campbell Thompson. Later on, the material was systematized, joined and copied by Franz Köcher and published by 1980 in *Die babylonisch-assyrische Medizin in Texten und Untersuchungen,* volume 6. The *Grossmeister*, Köcher, produced hand copies and indices of cuneiform manuscripts which are extremely valuable for the current book, but Köcher hardly ever published editions or translations of medical texts. Multiple therapeutic texts on eye disease were discussed in Fincke 2000: 6ff., which has a good introduction on textual history. Notably, Jeannette Fincke's dissertation concentrates on terminology, and does not edit entire texts. The IGI treatise from Nineveh was translated and commented on for the first time by Annie Attia in 2015. Dr. Attia's work is of importance, since it is the only treatment of IGI from a professional ophthalmologist. Thus, her work has been consulted together with our critical edition.

3rd Millennium BCE

Incantations

Sumerian incantations of the 3rd millennium BCE are the earliest witnesses to eye disease therapy.

VAT 12597 originates from Fāra-Šuruppak, dating to ED IIIa, 2600–2500 BCE. A passage from this tablet (r. X 7 – XI 9) contains an incantation, which is the earliest example

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of an historiola on eye disease (Krebernik 1984: 54–63, No. 8; Cunningham 1997: 19, 37, 41; Rudik 2011: FSB 23). This genre is also known from the 2nd and 1st millennium BCE.

HS 1552 from Nippur is another incantation on eye disease, dating to the Ur III period, ca. 2100–2000 BCE (van Dijk and Geller 2003: 26; Rudik 2011: FSB 24).

Therapeutic prescriptions

Beside incantations, there are a few Sumerian prescriptions for eye complaints from the 3rd millennium BCE, which are worth being re-edited and translated here, since they were previously thought to be incantations.

CBS 6195

Origin and date: Nufar-Nippur. ED IIIb (2500–2340 BCE)
Copy: PBS 9/40
Photo: http://cdli.ucla.edu/dl/photo/P263932.jpg
Literature: van Dijk and Geller 2003: 77

1	x x ˹še-bar˺? utu	… (old reading [é]n ˹é˺-[nu-r]u / ˹d˺utu)
2	7 [...] gi	and 7 reeds?
3	u_4-˹ten˺-ta	4you put 3in the evening
4	a-a ù-gar	in water.
5	ge_6-ba-a-ka	At midnight
6	igi dutu-šè	– before dawn –
7	igi-a gar-ra	apply (the salve) onto the eye.
r.1	eme-ni lú ì-ni-zu	The man who knows his language(-spell)
r.2	a-rá-7-àm	r.3rubs his eye (with the salve) r.2seven times.
r.3	igi-na bí-íb-ùr-e	

This prescription shares similarities with a therapeutic ritual, see Rudik 2011: FBS 102. FSB 82.

Another text with ‘defective’ Sumerian spellings exemplifies early therapeutic prescriptions of eye disease in combination with treating with lice.

HS 1357

Origin and date: Ur III (2100–2000 BCE)
Copy: TMH NF I 357
Photo: https://cdli.ucla.edu/dl/photo/P134667.jpg
Literature: van Dijk and Geller 2003: 75; Bauer 2007: 179; Attinger 2008: 10, 12

1	ì-nin	(for ì-nun)	
2	uh-uš-da ù- da-hi	(sandhi for uh-huš)	He mixes [1]ghee [2]with red louse.
3	igi gi_6-ga ù-gar ba-áš	(for igi gig)	He applies (the salve) on the sick eye (and) he anoints (the sick eye).
4	nam-en-li uh-uš-da ù- da-hi		He mixes prime quality juniper (resin) with red louse.
4	uh-huš ba-áš		He rubs on the red louse.

2nd Millennium BCE

Incantations

By this period Sumerian and Akkadian incantations were addressing eye complaints from different provenances. The evidence shows that incantations spread throughout Mesopotamia and its periphery, as an integral part of medical procedures. Notably, part of the material from the 2nd millennium BCE was transmitted into the 1st millennium BCE. Incantations portray etiology and implicit theory of harm through metaphorical language (see Panayotov 2017).

VAT 1413 is an Old Babylonian (1900–1600 BCE) incantation in Sumerian (CDLI P342906; Falkenstein 1931: 44. Cunningham 1997: 141, No. 198). This text features a divine dialogue between Enki and Asalluhi, which is a spiritual topic in incantations used in Mesopotamian magic and medicine for three thousand years (Annus 2019). VAT 1413: 15 shows the earliest example of the rubric [ka-in]im-ma igi-gi[g-ga-kam] (if reconstructed properly), which is common later on in Nineveh, e.g. IGI 1: 96', 108' and so on.

Ish. 35-T. 19 is an Old Babylonian forerunner in Akkadian of an historiola concerning the creation of the *merhu*-kernel. The etiology of this harmful agent is also known from the Nineveh eye disease treatise, which is briefly discussed with literature in the notes to IGI 1: 194'.

BM 122691 is an Old Babylonian tablet from Tel Duweihes. Its lower edge reads *ši-iptum ša i-ni* [(x)]. However, this incantation is directed against the 'evil eye' and is not

therapeutic, although intended to avert evil (discussed with literature in Geller 2003; and SEAL 5.1.7.2).

BM 79022 rev. 19ff. (edited and discussed in Wasserman 2010) mentions a brief incantation similar to an historiola. Its content suggests that it has been used for therapeutic purposes.

YBC 4616 is another historiola describing a worm causing eye reddening. A later version of the very same incantation might have contained some of the broken parts of the Nineveh IGI treatise, as did Ish. 35-T. 19 (translation modified after SEAL 5.1.26.2):

> Anu begot the sky, the sky bore the earth, the earth bore the stench, the stench bore the mud, the mud bore the fly, the fly bore the worm. The worm is the daughter of Gula, clad in a garment, thick with blood – the devourer of child's blood is reddening his eyes. Damu cast the incantation and Gula slew the thick worm, slaughtered them for the (sake of the) child. He opened his mouth, took the breast, raised his eyes, (and began to) suck. The incantation is not mine, it is the incantation of Damu and Gula. Damu cast (it) and I (the medical practitioner) took (it).

In addition, several incantations from the Middle Babylonian period (1400–1100 BCE) could be recognized as forerunners to the Nineveh material. The comparable texts – under § I. 3 Related Manuscripts from Different Cities; Periphery – were found in Emar and Ugarit, and might be considered either as a Babylonian import or local production.

Therapeutic prescriptions

Old Babylonian therapeutic texts (1900–1600 BCE) are written almost exlusively in syllabic orthography and are welcome counterparts to the encrypted material from the first millennium BCE edited in this volume.

ASC 207 col. i has a passage on eye disease, which was initially transcribed during BabMed seminars in Berlin 2017–2018, mainly by H. Stadhouders. This remedy illustrates internal medication for *amurriqānu* 'jaundice' of the eyes. Healing this eye condition is also known from IGI 2: 115f'.

27	AŠ *a-wi-lum*	'If a man's
28	*i-na-šu a-wu-ri-qa-*	eyes [29]suffer
29	*-na-am ma-ar-ṣa*	[28-29]from 'jaundice'.
30	*zi-bi-bi-a-nam*	[31]You crush
31	*ta-ha-aš-ša-al-ma*	[30]*zibibiānum*-cumin [31]and
32	*a-na li-ib-bi*	[34]pour (it)
33	*ši-ka-ri-⌜im⌝*	[32]into

34	*ta-ša-ap-pa-*[*a*]*k*	[33]beer.
35	*ta-ša-aq-q*[*í*]	You give (to him) to drink (it).
36	*i-ne-*⌜*e-eš*⌝	He will get better.'

Notably, ASC 207 uses AŠ, either in place of the more common DIŠ for *šumma* (Fincke 2007: 134), or as a short hand for *ašar* used in HS 1883, see below and the notes to IGI 1: 55.

HS 1883 (BAM 393) is an Old Babylonian tablet from Nippur, which contains eye prescriptions among others (Attinger 2008: 14, fig. 2; Geller 2006). However, I.L. Finkel has suggested that this tablet might possibly be a later copy of an Old Babylonian text, see Abusch and Schwemer 2011: 66. For the incipit style see the notes to IGI 1: 55.

Old Babylonian Medicine from Ur by Irving L. Finkel

Worth noting are some unpublished Old Babylonian medical texts in the British Museum, which were excavated by H.R. Hall (Finkel 2004: 26). Selected passages on eye disease will be briefly presented below. The full edition of the tablets will follow in a separate publication.

BM 113967+ col. ii (part of a two-column tablet)
17' [*šum-ma*] *a-wi-lum i-na-šu ṣí-i*[*l-la-am*]
18' *me-e* ⌜*šur-ni*⌝*-im me-e am-ma-aš-tam*[?]*-*[*ka-al*(?)]
19' *me-e pu-qú-ut-t*[*i-im* .....]
20' *ši-zi-ib* [*musukkati* (?) .....]
21' *i-ni-šu te-qì-*[*ma*]
22' *i-*[*ne-e-eš*]
17' If a man's eyes (suffer) 'shadow,'
18' [21']you daub his eyes [18']with *šurnû* juice, *maštakal* juice
19' *puquttu* juice [.....]
20' milk from [a woman in maternity (?), and ...]
22' and he will get better.

BM 113935+ col. iv (part of a three-column tablet)
18' *šum-ma a-wi-lum i-na-šu ši-ši-tum*
19' *ma-ar-t*[*a-a*]*m ša ar-ab-b*[*i*[?]]-x
20' [*t*]*e-le-eq-qí-ma*
21' *a-na pu-ur-sí-ti-im wa-ru-*[*uq-ti-im*]
22' [*ṭ*]*a-ab-ta-am za-ku-ta-a*[*m*]
23' [*u*]*b-ta-al-la-*⌜*al*⌝*-*[*ma*]

24f.' fragmentary
18' If a man's eyes have a membrane
19' [20']you procure [19']gall of a doormouse[?] ...
21' [23']He shall mix (it) [21']in a green bowl
22' with pure salt.

BM 113938+ col. iii (?) (part of a three-column tablet)
3' [*šum-ma a-wi*]-*lum i-na-šu e-ši-a*
4' [.....]-*am hu-šu-ul-ma*
5' [.....] *pu-šu-uš-ma*
6' [.....] x *šu-ku-um-ma*
7' [(...) *n*]*i-iṭ-lam ú-ṣa-*⌜*ab*[?]⌝
3' If a man's eyes are blurred,
4' crush [.....], and
5' anoint him [.....], and
6' apply [.....], and
7' [...] will increase eyesight.

Therapeutic prescriptions (continued)

Mesopotamian eye disease texts were transmitted in Hattuša. They are conveniently collected on http://www.hethport.uni-wuerzburg.de /HPM/index.html, CTH 809. Passages paralleling the IGI treatise from Nineveh have been included in the present edition in § II.3 Related Manuscripts from Different Cities BoA (KUB 4/50) and in § III.3 Related Manuscripts from Different Cities BoB (KUB 37/2) and BoC (KUB 4/55).

More therapeutic texts on eye disease in the late Old Babylonian and/or Middle Babylonian period are still unknown, and their existence is acknowledged by the catalogue BM 103690, line 39: ⌜DIŠ NA⌝ [x x] x dam? pa ⌜IGI.MIN⌝-*š*[*ú*? *i*]-*bar-ru-ra* 'If a man ... his eyes flicker' (Finkel 2018).

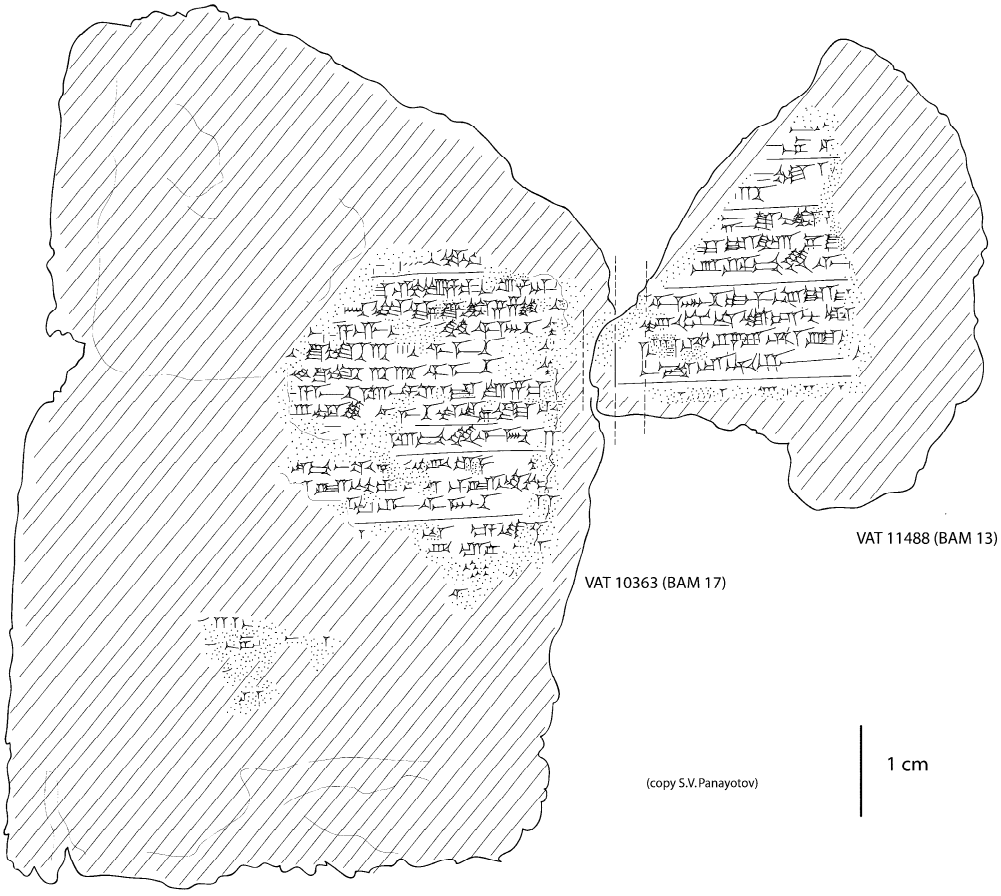
Middle Babylonian therapeutic prescriptions are rare, but recently some tablets from Baghdad (IM 202631 and IM 202652, photos courtesy of Dr. A.A. Fadhil) show that the period witnessed an abundance of therapeutic material. The exemplar IM 202631 is faked to a great extent, although some original passages remain. The original signs of the tablet are written in Babylonian script, most likely of Middle Babylonian origin, since the shape of the signs is similar to BM 103690 (Finkel 2018). IM 202631 was a large six column tablet, similar to IM 202652, a forerunner to BRONCHIA 5 (Panayotov 2018a: 90, 102). Probably, both tablets (IM 202631 and IM 202652) originate from the same unknown provenance where fake text was added to the original tablets. Sadly, only a few genuine passages of IM 202631 are preserved. The last prescription from the first column of IM 202631 shows a remedy against blood in the eyes (DIŠ.NA IGI.MIN-*šú* MÚD DIRI-*ma*). Prescriptions against this condition are also known from IGI 1: 36', 45', 79' and so on.

Furthermore, on the reverse of IM 202631, there are fragmentary eye prescriptions mixed with fake passages.

Several Middle Assyrian prescriptions on eye disease are preserved from the city of Assur. The exact dating of the manuscripts from Assur is rather difficult, but paleographic and material observations suggest that there are more Middle Assyrian tablets from Assur in the *Vorderasiatisches Museum zu Berlin* than previously expected.

BAM 12 is a neatly written Middle Assyrian tablet, baked in antiquity, showing the typical contrast between the white slip and the reddish core, exemplified by the so-called Tiglath-Pileser I (1115–1076 BCE) tablets (see Lambert 1957/58: 39ff.; Lambert 1965: 283; Pedersén 1985: 31). Köcher's copy shows several miscopied signs, e.g.: i' 9' ^{giš}MI.PAR$_4$; i' 11' ^{giš}PÈŠ (which confused CAD Š/3 386b); i' 17' PA.

Another tablet from the same period is AmA (BAM 165) mentioned in § I. 3 Related Manuscripts from Different Cities, which is partly related to IGI. The dating of BAM 18 and BAM 159 (see § I. 3 Related Manuscripts from Different Cities) might be Middle or Late Assyrian.



BAM 13, 17 and 25: according to Franz Köcher, VAT 11488 (BAM 13) probably belongs to VAT 11409+ (collated). But the shape of the signs, the thickness of the fragment as well as the colour of the clay are very different. VAT 10363 (BAM 17) can be tentatively dated as early Neo-Assyrian or late Middle Assyrian according to the shape of the sign LI [parameters: a2b4c5], l. 13', and also the shape of TU, col. i 3' (see Gottstein and Panayotov 2014). Furthermore, the same shape of the sign LI [a2b4c5] can be observed on VAT 11488 (BAM 13) at line ii 9', which also shows Middle Assyrian MEŠ [a1b5] at l. 8' and AH [a3b2c5] at l. 6'. The copy above shows a possible positioning of fragments BAM 13 and 17. Additionally, VAT 16464 (BAM 25) has the same colour clay, and shows Middle Assyrian sign forms of BA on lines 5', 8' [a1b1c2], DIM [a1b3c2], the HI-group with five wedges [c5], and MEŠ [a1b5 or a1b4]. The thickness of the fragments (BAM 17= 3,2 cm, also Köcher, BAM 1: XV) and their similar features suggest that BAM 13, 17 and 25 were originally part of a three column tablet on eye disease, which might have been serialized. Other serialized Middle Assyrian medical texts from Assur are known, see BAM 11 (series for ghost afflictions: [rev: 36]18 *bu-ul-ṭú ša* SAG.KI.DAB.BA [37]IM.GÍD.DA 1.KAM.MA [38]*ša bīt*(É) *Ra-bi-a-ša*-[d]AMAR.UTU (*pace* the reading of Heeßel 2009: 25), and BAM 36 (series for lung problems), l. 5': [... G]IŠ.GÀR MUR.MEŠ [GIG.MEŠ].

1st Millennium BCE

Incantations

It is probably by chance that most of the material is known only from Nineveh. All of the incantations on eye disease known to us were collected and revised in the IGI Nineveh treatise by Ashurbanipal's scholars and are edited in the present volume. There are rare IGI parallels from outside of Nineveh, like Ms. HA (STT 279) from Huzirina in § I. 3 Related Manuscripts from Different Cities.

A systematic study of the figurative language of medical incantations in general was produced by Collins 1999 and Geller 2007c. Attia 2015 and Panayotov 2017 took a closer look at the eye disease incantations, which are the best example so far of an implicit theory of causation and etiology of ophthalmological problems, expressed through allegories and metaphors.

Therapeutic prescriptions

Like with the incantations, the biggest collection of eye disease therapeutic texts is the IGI treatise from Nineveh itself. However, it is not the only systematized therapeutic corpus of eye disease from the first millennium BCE. The series on eye disease from Assur is known only from catch-lines, as with BAM 3, which was incidentally an import from Babylonia ([col. iv 47] *ina pu-ut* [giš]ZU URI[ki] ZI-*ha*):

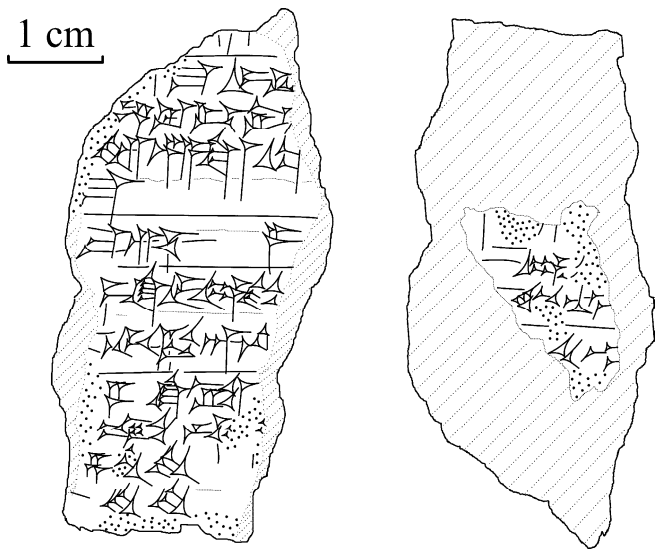
šumma(DIŠ) *amēlu*(NA) *īnāšu*(ᵀIGI.MIN-*šú*ᵀ) *ṣilla*(GISSU) *ár-ma arkīšu*(EGIR-*šú*)
The (series) 'If a man's eyes are covered with a shadow' (is written) after it (this tablet).

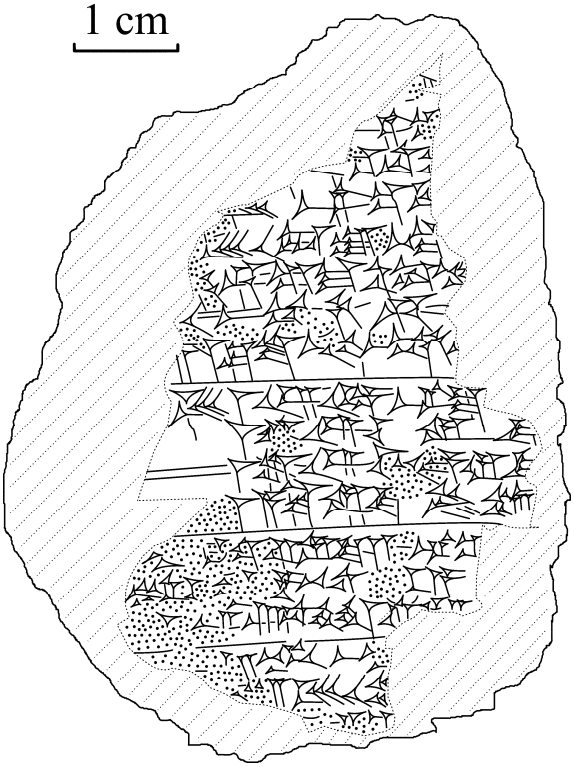
Pace the translation in Worthington 2006: 32, *arkīšu*(EGIR-*šú*) is a short-hand for *arkīšu*(EGIR-*šú*) *iššaṭṭar*, designating the next tablet in a cuneiform collections, as shown by the catchline of the next relevant example, AO 11447 (Geller 2007b).

šumma(DIŠ) *amēlu*(NA) *īnāšu*(ᵀIGI.MINᵀ-*šú*) *dāma*(MÚD) *malâ*(DIRI) *maṭâma*(LAL-*ma*) *u i-bar-ru-ᵀraᵀ ... arkīšu*(EGIR-*šú*) *iš-šaṭ-tar*
The (series) 'If a man's eyes are full of blood, and flicker, (and his eyesight) is diminished...' is written after it (this tablet).

Although the Assur series on eye disease are unknown, a number of therapeutic texts from Assur allude to their content, for instance AO 11447, BAM 3 (13, 17 and 25 see above), 14, 15, 16, 18, 19, 20, 21, 22, 23, 28, 50, 156, 159, 165, 183, 328 (BM 123362, Ms. XA, see § IV. 1. 3 Related Manuscripts from Different Cities). They all share common therapeutic texts with the IGI treatise from Nineveh, noted in the present edition. Isolated additional therapeutic material from Assyria is also known from Kalhu (CTN 4/123, Ms. KA in § II. 3 Related Manuscripts from Different Cities) and Huzirina (STT 279, Ms. HA in § I. 3 Related Manuscripts from Different Cities), but also STT 105.

As stated above, BAM 3 shows that some therapeutic eye disease texts in Assur were imported from Babylonia. Mainly I.L. Finkel and M.J. Geller have collected Late Babylonian unpublished tablets concerned with eye ailments in the British Museum. Other Late Babylonian texts on eye disease are scattered around the world. Presumably coming from Babylon are: VAT 17406 (BAM 382, Ms. bB, § II. 3 Related Manuscripts from Different Cities), BM 37119 (a copy of SVP to the left), BM 38483, BM 38673, BM 38679 (a copy by SVP on the next page), BM 39872, BM 39725, BM 40737 (Ms. xB in § III. 3 Related Manuscripts from Different Cities), BM 41173 + 41199, BM 41261, BM 41293 + 44866 (Ms. bA in § I. 3 Related Manuscripts from Different Cities), BM 45941, BM





49133. The catchline of BM 35512 refers to relevant prescriptions as well, see Bácskay 2018c.

Presumably from Sippar are: BM 54641 + 54826 (Ms. xA §I.3 Related Manuscripts from Different Cities), BM 50508, BM 54808 + 54816, BM 70420 + 70436, BM 76023 + 83009, BM 73420, BM 109097a, BM 68373, BM 50508. Another important tablet from this city is IM 132670 (Ms. sA in § I. 3 Related Manuscripts from Different Cities). Presumably from Sippar is also CBS (Kh2) 1543, *PBS* 1/2, 121 in Abusch and Schwemer 2011, text 10.2, p. 405. *Pace* their transcription of the incipit we read SAG.KI.DAB.BA TUK.TUK.

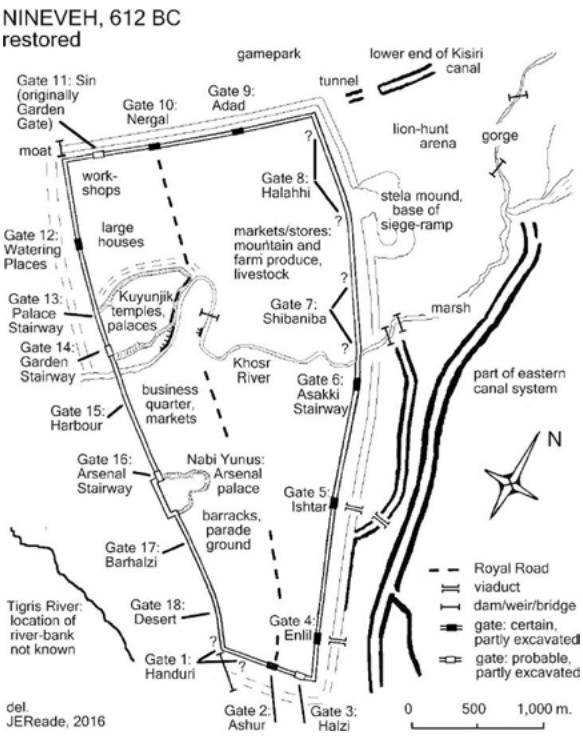
Uruk has also yielded therapeutic texts on eye disease, like BAM 403, BAM 410, SpTU 50, and SpTU 22+85.

The provenance of BM 132097 (Geller 1988) is unclear, see Fincke 2000: 9 fn 59. Also, the Nineveh fragment, K 10535 edited in § IV. 9 NV (AMT 18/3) was a Babylonian import from an unknown city, if not written in Nineveh.

The Late Babylonian material on eye disease, although partly fragmentary, needs a proper edition and comparison with the Nineveh IGI treatise, which is beyond the scope of the present volume.

Eye Disease Texts meet Royal Letters in Nineveh

The IGI treatise from Nineveh is the second chapter of the Nineveh Medical Encyclopaedia (henceforth NME), created especially for the Royal Library of Ashurbanipal in Nineveh (Panayotov 2018a: 109ff.). Vestiges of the NME were discovered in the ancient mound of Kuyunjik, where the royal letters of Nineveh were also found. The letters reflect daily life of the King, his consort, and his scholars, who were dwelling and working inside the capital (on the next page see the reconstruction of the Nineveh vicinities by Reade 2016: 48 fig. 7). Royal letters contain abundant medical references and there is a good discussion of this material in Geller 2010a: 75ff.



Information from the NME is reflected in royal letters but there are certain specifics which make comparisons difficult. The royal letters and NME employ stylistically different language while addressing the same medical issues. The royal letters were written mainly syllabically in an official Assyrian dialect, politely addressing the king in indirect speech, while therapeutic prescriptions of the NME were written mostly logographically in the technical language of medicine, but employing literary language in the therapeutic incantations. Let us observe how a common head therapy is addressed in the first chapter of the NME: (SAG.DU-*su*) SAR-*ab* LAL-*ma* 'you shave (his head and) bandage (it with bandages)' (see the edition in § V, NI i 4ff.), compared to the same statement from a royal letter: *ma-a* SAG.D[U-*su*] *nu-gal-li-*[*ib* ...] *ṣi-in-di* [...] *ni-ir-k*[*u-us*] 'let us shear [his] head and bind [it] with [...] bandages' (modified after SAA 10: no. 335: 2ff.). Logically, royal scholars must have had access to the NME and similar material from the Royal Library, since their letters allude to therapeutic material which existed in Nineveh, like the expression *ina bu-ul-ṭi gab-bu* 'among the entire therapeutic prescriptions' (modified after SAA 10: no 326: 3), implying most probably the content of the NME. This very same letter tells us about a remedy for a royal baby: r.1*ina pi-i-šú ù* DÚR-*šú* r.2*ú-še-šar-am-ma* r.3ʳ*i*ˀ-*ba-al-lu-uṭ* 'he purges through his mouth and his anus, and he will get better' (modified after SAA 10: no 326). Notably this looks like a direct citation from the eighth chapter of 'STOMACH' of the NME: *ina* KA-*šú u* DÚR-*šú* SI.SÁ *tu*-SUD-*šú-ma* TI-*uṭ* 'he purges through his mouth and his anus, you sprinkle him and he will get better' (modified after Cadelli 2000: 72: 30, see especially p. 352 fn. 347, and p. 397 fn. 121).

Similar, to the case addressed above, we can compare other ailments and treatments from the IGI treatise to royal letters. Let us look at the *hunṭu* condition (a kind of burning sensation in the eyes) of the Assyrian king Esarhaddon. The word *hunṭu*, as a kind of fever, described the poor health of the Assyrian king (Stol 2007a: 21; Parpola 1983). In one letter, the scholar Ikkaru refers to Esarhaddon as 17*hu-un-ṭu* 18[*ina* ŠÀ *e*]-*na-a-te uk-ti-il*$_5$, '*hunṭu* lingered in (his) eyes' (modified after SAA 10: no 328). This letter also suggests

that the *hunṭu* condition might be linked to warm weather (SAA 10: no 328 r.9ff.). In another letter, Esarhaddon complains in a statement reported by the scholar Marduk-šākin-šumi: [6]*ma-a a-hi-ia* [7]*še-pi-ia la-mu-qa-a-a* [8]*ù ma-a* IGI.MIN-*ia la a-pat-ti* [9]*ma-a mar-ṭak kar-rak* 'My arms and legs are weak and I cannot open my eyes, I am scratched and lie prostrate!' Then Marduk-šākin-šumi says: [10]*ina* ŠÀ *ša hu-un-ṭu* [11]*šu-ú ina* ŠÀ *eṣ-ma-a-ti* [12]*ú-kil-lu-u-ni* [13]*ina* ŠÀ-*bi šu-ú* [14]*la-áš-šú hi-ṭu* 'This is because *hunṭu* lingered inside the bones. It is therefore not serious' (modified after SAA 10: no 242). This complex medical condition was caused by *hunṭu*, which seems to occur often to various persons from the royal family and affecting different body parts, eyes included (also SAA 10: nos. 193, 243, 320). The chief physician Urad-Nanaya, who had difficulties identifying Esarhaddon's *hunṭu*, treated it with different salves and *ṣilbānu*-bandages (probably crosswise arranged, see Geller 2010a: 83 and Marsham 2011: 103), which caused the king to sweat (SAA 10: no. 315). The condition *hunṭu* also affected royal babies, but it was reported as not serious (SAA 10: no. 213: [8]*hi-ṭu la-áš-šú*).

Surprisingly, if we survey the therapeutic material on eye disease, we do not find the condition *hunṭu* referring to eyes, otherwise common in royal letters. This must be due to stylistic differences between letters and therapeutic texts. First, the word *hunṭu* (var. *humṭu*) is the Assyrian form of *himṭu* (Stol 2007a: 21). However, *himṭu* does not seem to appear in therapeutic texts in this form. Instead of the nominal form, therapeutic texts employ a stative form of *hamāṭu* 'to burn' (IGI 1: 14') describing a burning sensation of the eye, which might also suggest a reddish color, since the stative is also used in physiognomic omens (Alamdimmû tablet 8) to describe the color of the human face (Böck 2000: 112: 73ff.). Often, *hamāṭu* refers to inflamed eyes due to *ṣētu*-sun-heat (IGI 2: 9). One therapeutic prescription from IGI 3 is particularly descriptive: [49']If a man's eyes cannot see (*īnāšu lā inaṭṭalā*): that man is inflamed with sun-heat (*ṣēta hamiṭ*): [50'][you pound] [49']one shekel of bat guano, [50']half shekel of white plant, (and) one fourth shekel of *emesallu*-saline solution in mountain honey and ghee, (and) you daub his eyes (with it),' see also § IV.6 NS (AMT 18/4): 6'). The phrase *īnāšu lā inaṭṭalā* 'his eyes cannot see' is another way of saying IGI.MIN-*ia la a-pat-ti* 'I cannot open my eyes' cited in SAA 10: no 242 above. The prescription of IGI 3 mentions the warm weather suggested as a probable cause of *hunṭu* (SAA 10: no 328 r.9ff.), similar to the expression, 'inflamed with sun heat' (*ṣēta hamiṭ*) from therapeutic texts. Sun-heat (*ṣētu*) was a daily problem in Mesopotamia, and it was likely that it caused sunstroke. We suggest that *hunṭu* from the royal letters is equivalent to the stative of *hamāṭu* 'to burn', or to the expression *ṣēta hamiṭ* 'inflamed with sun heat' from therapeutic texts. Stol asks, 'Is it possible that the normal Assyrian word for fever *hunṭu* is an abbreviation of this Old Babylonian *himiṭ ṣēti*?' (Stol 2007a: 38, also 34 fn. 90). In other words, *hunṭu* from the royal letters represented a burning sensation (i.e. inflammation) caused by sun heat, corresponding to the stative of *hamāṭu* and the expression *ṣēta hamiṭ* from therapeutic prescriptions. The burning sensation could be recognised by its reddish color, but was nothing really to worry about, as royal physicians report.

Cuneiform Eye Disease Texts in Near Eastern and Greco-Roman Perspective

From the 5th century BCE onwards, Greco-Roman scholars argued about how visual perception functioned. Consequently, they developed extramissionist and intromissionist theories of vision and sight (Coughlin 2016: 56). Cuneiform medical texts are silent about the function of the human eyes and vision, although implicit eye-disease theory and etiological explanations can be recognized in medical incantations. The eye in Mesopotamia was conceived as a water source dating back to mythical time when the world was created (Panayotov 2017: 211f.). This metaphor reflects tears which flow from the eyes like a river from the ground.

Historical sources from the Ancient Near East occasionally mention ophthalmological drugs and doctors dispatched internationally. In the 13th century BCE, the Hittite king Hattušili III suffered from eye problems. He received particular drugs for his treatment from the Egyptian Pharaoh Ramses II. This case was recorded in diplomatic correspondence (Edel 1976: 44, 76; Ritner 2000: 112; Couto 2013: 405). Another case is reported by Herodotus: in the 6th century BCE a chosen eye-doctor of the Egyptian Pharaoh Amasis was unwillingly sent to Persia, in order to help with eye treatment for Cyrus (cf. Zaccagnini 1983: 255f.).

Ancient Egypt, prominent in eye-doctors and remedies, shares conceptual metaphors with Mesopotamia, ancient Greece and even modern languages. The Egyptian *pds.t* 'small ball' – describing an eye problem – is similar to the Akkadian term *merhu* 'kernel,' or Greek *krithè* 'barley grain,' or even German *Gerstenkorn* (Panayotov 2017: 214ff).

Medical prescriptions from Papyrus Ebers (16th century BCE) resemble material edited in this volume:

> Another (recipe) for removing cloudiness from the eye(s). Myrrh: 1 measure. "Great-protection" mineral/incense: 1 measure. šsy.t-mineral: 1 measure. Colocynth/carob (d3r.t): 1 measure. Lower Egyptian gy.t-plant: 1 measure. Green eye paint: 1 measure. Excrement(?) of a gazelle: 1 measure. Interior of a q3dy.t-animal/insect: 1 measure. White/bright oil. Place in water. Allow to spend the night in the dew. Strain. Bandage with it for four days. Otherwise said: Then you should pour it by means of a feather of a vulture (as an eyedropper). See Westendorf 1999: Ebers § 339.

Drugs in this prescription have precise measures, also found throughout Mesopotamian eye disease material; for references see SILA$_{4/x}$, *uṭṭatu*, *šiqlu* in the glossary. Furthermore, the Egyptian formulation 'allow to spend the night in the dew' is another way of saying 'let it stay under a star' (= stay overnight), frequent in Mesopotamian medicine as well (IGI 1: 81', IGI 3: 34'), see Ritner 2000: 112. Another comparable drug is 'excrement(?) of a gazelle,' reminiscent of the common 'gazelle droppings' (IGI 2: 177'; IGI 3: 72'). The duration of the eye bandage in Ebers is also known from IGI 2: 1–7. The alternative use of a vulture feather as an eye-dropper comes close to the drug application by

bronze tube in IGI 1: 86f.', and although the medical instrument is different, the formulation, style and technology are comparable.[1]

A common practice in ancient Near Eastern medicine deserves to be mentioned – the treatment of blindness with animal liver (Stol 1986), as recorded in IGI 3: 75 (employing a donkey-liver), 81, 89. A chronological survey would be particularly telling for universal healing practices in the ancient Near East. In the 16th century BCE, Papyrus Ebers mentions the use of beef liver against blindness:

> Ein anderes (Heilmittel) für die Blindheit in beiden Augen: Leber des Rindes, gebraten (und) ausgepreßt; werde daran geben (=an das Auge). Wirklich vorzügliche (Methode). See Westendorf 1999: Ebers § 351.

Papyrus London from the 14th century BCE mentions a similar case:

> Ein anderes Heilmittel. Leber des Rindes, gegeben auf Feuer von Strohhalmen des Emmers oder Gerste, geräuchert in ihrem Rauch; werde ihr (der Leber) Wasser ausgedrückt an die beiden Augen. See Westendorf 1999: 40, 149, 612.

Papyrus London is useful for pointing out international medical relationships, since it contains references to Crete as Keftiu (Arnott 2004: 165f.), and the Near East as Samāna (see Beck 2015). Also, the first Semitic spell (27) from Papyrus London mentions 'another incantation against the strangulation-disease (*ḥmkt*) in the language of the foreigners' (Ritner 2000: 110). We suggest that *ḥmkt* derives from the Akkadian medical condition *hiniqtu*.[2]

The material on blindness from Hattuša has been noticed and discussed by Stol (1986: esp. 296f.), and included in the present edition to IGI 3: 81ff.'

IGI material from the 7th century BCE, edited in the present volume is also comparable to the Hippocratic Treatise on the Eye, 5th century BCE:

> As a medicaton for nyctalopia (night blindness) let the patent drink squirting-cucumber juice, have his head cleaned, and reduce his neck as much as possible, compressing it for a very long time. When remission occurs give him raw bull's liver dipped in honey, and have him drink down as much as he can, one or two. See Potter 2010: 385.

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1 Akkadian recipes regularly employ a feather to induce vomiting. The Babylonian Talmud refers in several instances to drugs (such as goose fat) being applied with a feather.

2 In this respect, Semitc loanwords of medical plants employed in eye therapy are known in Mycenaean Greek: *Κύμινον* and *Σέλινον*, Akkadian *kamūnu* and *sahlānu* (Bourguignon 2012). Another case is *Sikillu* and *Σκίλλα* (Rumor, in press). Furthermore, a shared structural design exists between Akkadian drug lists (eye drugs included) and herbal descriptions in Theophrastus (Rumor 2018). The Mesopotamian drug list Irianna equates Akkadian drugs to those in the languages of *Kinahu*, *Muṣru*, *Šubria*, *Ahlamu*, *Kaššū*, *Elam* and *Meluhha* (forthcoming edition by J. Scurlock and J. Fincke), pointing to global Near Eastern medical terminology transfers.

Moreover, the Hippocratic Treatise on the Eye mentions copper as an ingredient used in eye therapy:

> When the eyelids become scabby, and itchiness is present: grind a lump of flower of copper against a wet stone, next rub off the eyelid with it, and then grind some scale of copper as fine as you can (= produce powder). Then add strained juice of unripe grapes, grind fine, and pour what is left into a red copper vessel, continuing to grind it a little at a time until it has the thickness of *mussotos*. Then, when this becomes dry, grind it fine and apply. See Potter 2010: 384f.

Diverse copper products are often found in Mesopotamian eye disease prescriptions; for references consult the present glossary under: *erû*, *erû labīru*, *erû zikaru*, *hīl erî*, *šuhtu*, *šuhtu ša tangussi*, *tangussu* (comparable to 'a red copper vessel' above).

In the first 1st century CE, Dioscorides, *De Materia Medica*, Book 2, mentions goat liver as a treatment for blindness:

> The watery fluid that drips from the liver of a goat whilst it is a roasting is good rubbed on for those troubled with night blindness. If anyone receives the smoke of it with open eyes whilst it is boiling he receives benefit from this. Eaten roasted it is good for the same purpose. They say that epilepsy may be discerned by eating the liver (especially) of the buck goat. See Osbaldeston and Wood 2000: 199.

Probably dating from the same century are the eye disease prescriptions found in Celsus 'De Medicina':

> There is besides a weakness of the eyes, owing to which people see well enough indeed in the daytime but not at all at night ... But such sufferers should anoint their eyeballs with the stuff dripping from a liver whilst roasting, preferably of a he-goat, or failing that of a she-goat; and as well they should eat some of the liver itself. But, we may also use with advantage the same remedies which dry up scars and trachoma. Some add honey to pound purslane seed until the mixture no longer drops from the end of a probe, and with it anoint the eyeballs. The same exercises, baths, rubbings and gargles are also used for their patients. See Spencer 1989: 225f.

The resemblances between the Mesopotamian treatment of blindness and those from the Babylonian Talmud (5th century CE) were pointed out by Stol 1986 and Geller 1991. Remarkably, the above-mentioned treatments have even commonalities with the much later Syriac Book of Medicine, a heterogeneous medical compilation:

> Another (prescription), which is to be used for those who cannot see in the twilight. Take the liver of a goat (or, stag), roast it until it is half-cooked, squeeze out the juice and catch the liquid which flowed from it in a glass vessel, and smear the eyes with it, and let the patient eat the liver. Now others stew the liver in a cooking pot, and order the patient to hold his head over the pot and to keep his head covered on all sides. The above medicines constitute the means which are to be used for dimness of sight, and effusion of the eyes, and nocturnal blindness. See Budge 1913: 96f.

Undoubtedly – via trade and diplomatic exchange – medical knowledge, doctors and drugs circulated in Egypt, Mesopotamia, Levant, Hatti, Mycenaean Greece and the

Greco-Roman World. The parallels in Ancient Near Eastern ophthalmological healing can be viewed as indirect borrowings and/or similarities in the light of a common prescription-based medical practice, rather than as a direct influence from one culture upon another. But a definitive view on this matter can only be based upon further research.