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**Seconde Partie**

Page 1	Pros and Cons of Mesopotamian Medical Texts <b>Strahil V. Panayotov</b>
Page 10	Engendering Healthy, Royal Heirs Some Notes <b>Francesca Minen</b>
Page 23	How to manage the hallow art of crafting strings of amulet beads? <b>Krisztián Simkó, Henry Stadhouders</b>
Page 37	Dreck-, Deck-, or What the Heck? <b>Maddalena Rumor</b>
Page 54	Healing substances and therapies in Mesopotamian women's health care texts <b>Ulrike Steinert</b>
Page 73	Abstracts des Communications

# Cunéiformes

(Minor corrections  
in red)

## *Dreck-, Deck-, or What the Heck?*

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### Abstract

Most ancient medical traditions, including the Babylonian, record a fair amount of medical ingredients with names that suggest they are made of foul substances, usually referred to as *Dreckapotheke*. While this label indicates a literal understanding of the substances, it is clear that in some cases they were not to be interpreted literally, neither in Mesopotamia nor elsewhere. How can we explain these names then? Among various suggestions, Franz Köcher in 1995 argued that such names of ingredients, specifically the “aš-names” of Uruanna III, were used in Babylonian medicine as “secret names” (*Geheimnisnamen* / *Decknamen*). Because this hypothesis has had such a pervasive influence on our understanding of Mesopotamian pharmacology (as well as the perception of it outside of Assyriology), the purpose of this paper is to examine the validity of the evidence offered to support it, while reflecting upon additional aspects that also contribute to the discussion. The results of this investigation conclude that the foundations upon which such theory was built are unsound. In particular, the aš-names of Uruanna III may have represented alternative names, word puns, synonyms, vernacular names, etc. (with the exact reason for their being collected in the same section still unclear), but do not provide evidence of a system of *deliberately* hidden names (*Geheimnisnamen*).

### Introduction

Even though truncated, the words in the title summarize well the topics in this article and the order in which I will address them, that is *Dreckapotheke*, *Decknamen* and the problems regarding their interpretation as *Geheimnisnamen*, secret names, according to one specific scholarly theory, also here analyzed.

*Dreckapotheke*, literally “filthy pharmaceuticals,” is a term which is commonly used to refer to a number of rather foggy and unappealing, if not downright repulsive, substances derived from any one of the three natural kingdoms, or even from less tangible, mythological or supernatural, realms, and that were employed in ancient pharmacological contexts (examples could be: “dog dung,” “human testicle,” or “soiled rag”). Such medical ingredients are even more strange when they do not display any clear phytochemical property, or extracting potential, not to mention when they pose a threat to the health of a patient. The cuneiform pharmacopoeia includes a number of these substances, which have puzzled modern historians for quite some time. Besides having to wrestle with the identification of ordinary plant names, scholars must also, in the case of *Dreckapotheke*, contend with whether these bizarre ingredients ought to be understood literally, or whether they represent synonyms, variants, foreign or vernacular expressions (perhaps derived from puns), or metaphorical designations, all of which are common constituents of folk plant nomenclatures. The possibility that such names may have served restrictive purposes of some sort (*Decknamen*), or even secretive intentions (*Geheimnisnamen*), is also to be considered.

In 1995 Franz Köcher published an influential article in which he argued that the latter possibility may be proved based on evidence obtained from a Neo-Assyrian list of drugs, the third tablet of Uruanna (better: Irianna)<sup>1</sup> = *maštakal*. The first section of the tablet matches pairs of drug names by means of a sign, aš, the meaning of which is still unknown, placed at the beginning of the right-hand column. Köcher proposed that this sign aš must point to secret

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<sup>1</sup> Cf. Stol 2003–5, 504b. The numbering system I use in this article follows my edition of Uruanna III published in JMC 29, 2017. When I quote from Köcher, however, I use his numbering, which was slightly different and can be found on his *Ein text medizinischen Inhalts aus dem neubabylonischen Grab* (1995).

knowledge (*Geheimnisnamen*, or *Decknamen*), and, since several substances included in the list could be classified as *Dreckapotheke*, he suggested that similar names of ingredients would be used in Babylonian medicine to conceal the real identity of conventional drugs (more on this below). Because this theory of *Geheimnisnamen/Decknamen* has, now for a quarter of a century, influenced our understanding of Mesopotamian drugs and medicine, as well as their perception outside of Assyriology,<sup>2</sup> it deserves a thorough examination.

In actuality the suggestion is quite reasonable, and in general terms it is even likely that, at various points in history, especially during times of socio-political disruption, the “meta-knowledge” attached to evocative or unusual ingredient names would have struggled to survive unaltered, as it was traditionally transmitted in oral form. The relative uncertainty resulting from every and any loss of explanation along the way would have contributed an additional level of esotericism to the already complex pharmaceutical lore. Babylonian scholars must have been very aware of the problem, the consequences of which they strived to avoid by re-establishing order within their pharmaceutical literature (as the colophon of Uruanna suggests), and eventually by designing tools aimed at preserving, and developing, *ad hoc* explanations, in the form of commentaries.<sup>3</sup>

It is also probable that, in particular contexts, medicinal ingredients may have been, for a host of reasons, intentionally *coded*, as seems to be the case of late astromedical therapy. The specific reasons for concealing (or intentionally altering) the identity of those ingredients can only, however, be speculative.

The topic is a problematic one, and thus the present focus will be, for the moment, on a single aspect of the discussion, that is on the evidence exhibited by Köcher to support his point. It will be shown that Uruanna III cannot be used to argue in favor of *secrecy* as the reason driving the presence of *Dreckapotheke* in medical recipes. Specifically, it will be argued that the names in the right-hand column of the aš section of Uruanna III are not to be understood as *Geheimnisnamen*.

For the reasons mentioned above, however, it is still possible that such names, or some of them, may have reflected, at different times in Babylonian history, or in specific contexts, various degrees of esoteric knowledge. Yet I would also stress that the medical art, in virtue of being a highly complex *techne*, would have already been almost inaccessible for most people, simply because it required long years of personal training and an incredible amount of first-hand experience to be mastered. In the absence of specified dosages, and especially in a world where drugs and their components needed to be adjusted to the circumstances of the medical case (season, time of the day, gender and physical condition of the patient, etc.),

<sup>2</sup> Publications of Classical Studies, including recent ones, refer to the third tablet of Uruanna as listing “secret knowledge,” a notion which clearly follows Köcher’s interpretation. See, for instance, Dieleman 2005, 194: “secret code names, or *Decknamen* ... Each of these items is followed (sic!) by the name for an ordinary herb, mineral or liquid as in the PGM XII list. Given this exact correspondence between the device of the PGM XII list and the third tablet of Uruanna = *maštaka*, it might seem obvious to assume that the Greek text is a reflection of Mesopotamian influence in the Greek Magical Papyri. However, this conclusion is probably not correct ... .”

<sup>3</sup> A good example is the medical commentary (BRM 4, No. 32) edited by Geller (2010, 168 ff.), where the scribe explained the terms he could read in a medical source text (also given in Geller’s edition). What is explained, translated (from Sumerian), or commented upon is not only several colorful and perhaps obscure *Dreckapotheke* names, but also very common herbs (e.g. *imhur-līm*, *kukru*) and actions (e.g. “to mix”). In the case of the medical substances, the scribe does his best to explain and describe them either through similarity to other plants (X *kīma* Y, X (is) “like” Y), or by providing more than one explanation (*šanīš*, “otherwise,” “alternatively”), or through the *Glossenkeil* (“means,” “meaning”). He appears mostly confident in this exercise, but in some cases he is rather uncertain and provides not only a second, but a third (*šalšīš*, l. 17) and sometimes even a fourth (*rebiš*, l. 17) alternative name or explanation. These are frequently based on word puns and etymology – often precarious, if not downright false etymology – and clearly were intended to offer a reasonable interpretation. What the text suggests is that, by the late period, a number of ingredient names probably presented some ambiguity, being known with more than one name, occasionally a truly puzzling name.

having a medical recipe at hand, or *knowing of* a certain medical technique, was no guarantee of success. A famous Neo-Assyrian letter is clear in this regard: in his response to the king's enquiry, the chief physician Urad-Nanaya complained about the way a simple nosebleed was handled at court by someone who evidently was not an expert. A procedure as elementary as the application of a tampon to the nose appeared, after all, to have been not such an easy task as Urad-Nanaya must have hoped, and the unfortunate patient had bled all evening. The chief doctor then explained to his lord what had been done wrong, and promised that the day after he would go to the palace to show in person how to perform the task correctly.<sup>4</sup>

I should finally say that, while Köcher's theory has, over the years, been the object of intense discussions among scholars, he may not have initially intended it to be definitive. It was in fact set out in the mere space of one single page (if we exclude the edition of W 21033) and issued as one of the appendices in an archaeological monograph. For this reason, we might wonder whether the author was still pondering the hypothesis himself, but his health was already withering at that time, and he passed away shortly after. Regardless, the idea was picked up and began to influence the interpretation of Mesopotamian therapy at times more than it probably should have.

What follows is an inquiry into the validity of its premises as they were proposed.

### Animal-based names of ingredients and “Dreckapotheke”

The study of medicinal ingredients in Mesopotamia is usually approached according to the natural kingdom, that is according to whether these ingredients are of plant, mineral or animal origin. This “natural” division is a good way to look at the material, but it runs into a notorious stumbling-block when having to deal with those ingredients whose nature is ambiguous as, for instance, plant names that have an animal element as part of them, including *Dreckapotheke*. The semantic interpretation of these names cannot be straightforward.

Assuming that names such as “*šammi šēri*” snake drug/plant, or “*lišān kalbi*” dog tongue, etc. are phytonyms, their presence in the Mesopotamian botanical nomenclature is not in the least surprising and follows semantic principles that are common to many languages,<sup>5</sup> and that ultimately stem from the physical experience practitioners have with the world around themselves.<sup>6</sup>

Plant names and attributions may, for instance, reflect *general qualities* (color, shape, surface type, size, place etc., e.g. *aktam šalmu* in Akkadian) or *the usage* of a plant (for food or medicine, e.g. the *bu'šānu* plant would have been called that way because somehow associated with the *bu'šānu* disease). Similar to many other cultures, Mesopotamian phytonyms also make a strong use of animal metaphors, and *physiological* or *morphological* attributions that normally belong to the animal semantic domain. These usually present underlying motivations; for instance “dog's plants” often include inferior, worthless, not

<sup>4</sup> See SAA X, N. 322 r.1–s.2: “Concerning the patient whose nose bleeds, the *rab mūgi* told me that much blood flowed yesterday evening. They are handling those tampons ignorantly! They put them against the cartilage (or septum? Akk. *naḥnaḥūtu*) of the nose, pressing the cartilage, and that is why the blood keeps coming out. They should put them into the openings of the nostrils; it will cut off the breath but the blood will be held back. With the king's consent, I will enter (the palace) tomorrow and give instructions.”

<sup>5</sup> Kreiter (1912) published a study on French names of plants with animal components; Hauenschild (1996) examined the presence of animals in Turkic plant names; Marzell (1913) wrote on German phytonyms formed

with animal names; many other works have examined the topic in several different languages. For further references on the subject, and an interesting investigation of bear phytonyms (bear tongue, bear ear, bear claw, bear bristle, bear tail, bear balls, and so on and so forth) in Eurasian languages and dialects, see Kolosova et al. 2017.

<sup>6</sup> This is true not only of plants, but also of minerals and stones. Cf. for instance Pliny's *Natural History* 37.167, where he writes that the *horn of Ammon* (*Hammonis cornu*), rather than the actual thing was a stone: “is among the most sacred stones of Ethiopia, has a golden yellow color and is shaped like a ram's horn” (the Egyptian god Amun-Ra was usually depicted as a ram). What he was referring to was indeed “ammonite.”

cultivated or even harmful plants, besides those serving as medicine in regards to dogs, either healing people from dog bites or used to cure dogs (Haber 1963). More specific substance attributions may point instead to an analogy with the morphology of the corresponding animal part/product as, for example, the “blood” of a plant often refers to its resin (e.g. *dām erīni*, cedar blood/resin),<sup>7</sup> “milk” usually denotes a plant’s milky secretions, “hair” may indicate its fibers, and so forth. Many other motives may be behind the naming of plants, such as geographical, social, emotional aspects, or even folklore, myths and other cultural expressions.

In short, animal components and body parts in folk plant names are common to many languages, both in antiquity and in today’s world; sometimes they are semantically transparent, an explanation may even survive,<sup>8</sup> or their naming could especially be used as a mnemonic tool.<sup>9</sup> Most other times, however, and especially in the case of *Dreckapotheke*, their nomination is so cryptic that understanding the motivation behind them is not easy in the least. While in the case of living languages it might be possible to query native speakers, in the case of Mesopotamia it is impossible to interview Babylonian scribes in order to clarify their metaphors, and thus we are usually left with no other choice than to interpret most of those names *literally*.

### The “secret” theory

Yet, our western experience with alchemy and esotericism has lead scholars to advance the hypothesis that some of these strange names may have stood for something else than they appear to claim, or, in other words, that they should not be read literally. This idea was first suggested by Reginald Campbell Thompson in 1936, when in regards to the *chemical* recipes he wrote that:

<sup>7</sup> The same happens in other languages as well, for example in Greek, αἷμα X “blood of X” seemed to denote substances able to coagulate, or solidify, as in the case of resins (Barbara 2008, 141).

<sup>8</sup> Cf. for instance BRM 4 No. 32, l. 15–6 (Geller 2010, 169): <sup>15</sup> *mun a-ma-nu* Û.MU.UN : *a-ma-nu* <sup>16</sup> [Û.M]U.UN *da-mu āš-šú* MUN *sa-mat šā KUR ma-da-a-a*.” Translated as: “<sup>15</sup> *Amānu*-salt (explanation): Û.MU.UN (Sum.) is (the same as) *amānu*, (etymological explanation) <sup>16</sup> Û.MU.UN (Sum.) is (also called) “blood” because the salt of Media is red (analogical explanation).”

<sup>9</sup> See for example the “Doctrine of Signatures,” where herbal physical characteristics were believed to reveal therapeutic values (e.g., the *Hepatica* plant was named that way because of the shape of its leaves, which resemble a liver, the plant was also assumed to be medicinally useful for liver conditions). The Doctrine is well attested in the Middle Ages, although it may have stemmed from ancient mnemonic systems employed to remember medicinal properties of plants and herbs and (Bennett 2007). A good example from Dioscorides could be *De Materia Medica* IV 190 in which he described a plant still known in English as “scorpion tail.” The text reads: “Large heliotrope that some call *scorpiouren* (scorpion-tailed) from the shape of its flower (...). At the ends is a white flower, slightly purple, and *curling like a scorpion’s tail*; the root is thin and useless. It grows in rough places. (...) It is also *suitable for people stung by scorpions* when drunk with wine and plastered on.” Shortly after, the same author presented another plant with similar virtues: “Scorpionwort: it is a small herb that has few leaves and seeds that *resemble tails of scorpions*. They *help people stung by scorpions* when plastered on” (*De Materia Medica* IV 192). Very similar renditions are also found in Mesopotamia, almost a millennium earlier; a plant (the name of which is unfortunately lost) was described in *Šammu šikinšu*, for instance, in the following terms: its “appearance is *like the tail of a scorpion*” (Stadhouders 2011, Text IIIb §6 and IV §9). It is quite possible that a number of plants in the Babylonian pharmacopoeia owed their names to their physical characteristics or to their medicinal properties. We know, for instance of a plant *rušrušu*, which appears to have been equivalent to “*Ú šā-mi zuqaqīpi*(GIR.TAB)” and of *zuqīqīpānu*, both “scorpion” plants (Ú *šā-mi* GIR.TAB : Ú *ru-uš-ru-šu*, Ú *ru-uš-ru-šu* : Ú *zu-qi-qi-pa-nu*, KADP 6 v 14–15 or Uruanna I 478–479). *Rušrušu*, at least, was known to be beneficial against snake bites, suggesting that, since these were often associated with scorpion stings, it may have relieved people from some consequences of venom, see CT 14 23 (K.9283):13: [Ú *r*]u-uš-ru-uš-šu : Ú *mihiš*(PA-iš) *šibbi*(MIR) : *ina šikari* (KAŠ.SAG) *šaqu*(NAG) *ina šamni*(Ī.GIŠ) *pašāšu/pitaššu*(EŠ.MEŠ), “*rušrušu* plant : plant for the bite of a *šibbu* snake : to give to drink in fine beer, to smear on repeatedly with oil (dupl. STT 92 i 13).

“The Assyrian was as ready to call what was almost certainly opium by the name of “lion fat” (*lipī nēši*) or “human fat” (*lipī amēlūti*), or castor oil as “the blood of a black snake” (*dām šerri šalmi*) as the later alchemists were to give ridiculous synonyms for mercury, cinnabar, cadmia and such.” (1936, xiii)

Thompson added that such unusual names, together with the progressively more frequent use of Sumerograms in the first millennium, may have been “intended to conceal professional knowledge from the layman” (p. xii).

Almost sixty years later, the same idea was embraced, and expanded, by Franz Köcher, who moved one step further and attempted to *prove* that some of these strange names were indeed intended to be used as *Geheimwissen*, secret knowledge. His argument centred around Uruanna = *maštakal*, the best-known and most comprehensive work of Assyro-Babylonian pharmacology, and in particular it focused on the beginning section of the 3<sup>rd</sup> tablet of the series (U3 from here on).

The full reasons for Köcher’s choice of this text will be illustrated and examined below, one by one, but in a nutshell they were based upon:

1. The analysis and interpretation of the crucial sign *aš* in Uruanna III.
2. Four examples of duplicate recipes in which Köcher intended to show that *Geheimnisnamen* were used to conceal normal names of plant.
3. A Neo-Babylonian tablet from Uruk that allegedly uses several of these secret names.

The initial ten lines of the *aš* section of U3, which includes about 140 entries,<sup>10</sup> are reported in the chart below. The text consists in a list of (for the most part) perfectly legitimate drugs on the left-hand column (A), and more bizarre names of medical ingredients, on the right-hand column (B).

All drugs in column A are separated from those in column B by one horizontal stroke, the *aš* sign (and thus from here after I will refer to this specific section of U3 as the “*aš* section”).

Line	A	B
1 (1)	Drug <i>šūšu</i> -licorice?	<i>aš</i> tail of mongoose
2 (2)	Drug tamarisk	<i>aš</i> dog neck
3 (3)	Drug ( <i>a</i> ) <i>murdinnu</i> - bramble?	<i>aš</i> spider leg
4 (4)	Drug <i>sikillu</i>	<i>aš</i> fat of ‘nest’ snake (young snake?)
5 (5)	Drug <i>šumuttu</i>	<i>aš</i> human feces
6 (6)	Drug <i>šumuttu</i>	<i>aš</i> <i>hulû</i> -mouse of the canebrake
7 (7)	Drug ‘fruit’	<i>kûr/ aš</i> human testicle
8 (8)	Drug <i>kamkadu</i>	<i>aš</i> <i>išqippu</i> -earthworm
9 (9)	Drug <i>bu’šānu</i>	<i>aš</i> dog tongue
9a	Drug <i>armēdu</i>	<i>aš</i> dog tongue
10 (10)	Drug <i>bu’šānu</i>	<i>aš</i> dog flea
	Etc. etc.	

Column B is commonly thought to be a list of *Dreckapotheke* and of animal-based drugs, as the following examples suggest:

<sup>10</sup> The numbering follows my edition of the text in JMC 29 (2017). What I there retained in parenthesis is Kinnier Wilson’s (or CAD’s) numbering.

*Dreckapotheke* ingredients:

- 5 (5). Drug *šumuttu* | aš human feces
- 42 (39). Drug *nikiptu* | aš dog dung
- 108 (103). Drug *kurkanû* | aš dust of the latrine

Animal-based:

- 1 (1). Drug *šūšu*-licorice? | aš tail of mongoose
- 7 (7). Drug “fruit” | aš human testicle
- 8 (8). Drug *kamkadu* | aš *išqippu*-earthworm
- 127 (122). Drug clod of the field | aš scorpion horn

When we look at the entire section more up-close, however, the interpretation of its contents becomes more problematic. Column B does not only include *Dreckapotheke* and the like, but also medical ingredients that belong to the mineral kingdom, and even good old plants and herbs. Here are some examples:

Mineral-based:

- 27 (25). Drug *tašnīqu* | aš *mūšu* stone
- 54 (51). Drug *ašqulālu* | aš *kalû*-paste
- 60 (56). Drug *emesallim*-salt | aš *šadānu šābitu*

Plants and herbs:

- 105 (100). Drug *šamušīru* | aš *išbābtu*-grass
- 109 (104). Drug *ḫazallūnu* | aš pomegranate pip/seed
- 138 (133). Drug *urbātu*-reed | aš papyrus
- 139 (134). Drug seed of *urbātu*-reed | aš *kungu*-rush

Thus, the plants in column A are associated with all types of materials in column B, regardless of their plant, mineral or animal origin. What is clear, at this point, is that these ingredients were not organized based on their *nature*. The usual, and traditional, classification based on the natural kingdom is thus not very useful here.

For this reason Köcher must have thought that the key to the interpretation of the aš section of U3 must be something that goes *beyond the nature* of those ingredients. And in this regard he was most likely right. Perhaps mindful of Thompson's suggestions about the chemical recipes, he then proposed, that the sign aš, in the middle, could be an indicator of some sort of “secret lore.”

He wrote:

“Ich vermutete (...), daß sich unter dem Zeichen /aš/, das im Sumerischen auch die Lesung /dili/ hat, ein Wort verbergen müßte, das so etwas wie Geheimnis oder Geheimwissen bedeuten könnte.” (Köcher 1995, 204).

He added that he found evidence for this idea in two lexical lists – Antagal Tablet B:229 and izi Tablet E:195a, where the sign aš (or Sumerian dili), would be paired to Akkadian *pirištu*, secret. *Pirištu* is normally written with the sign ḫal or ad.ḫal; it is occasionally attested as sag/dili in lexical contexts, but otherwise it is never written with only one stroke. In those two lists instead, Köcher argued, *pirištu*/secret is given as the Akkadian translation of dili *by itself*, and thus we would have good evidence that the names of ingredients in column B were used to conceal information “from the profane look of curious people.”

“Da es sich in Kolumne 2 meistens um Begriffe wie ‘Schlangenfett’ (...) usw. usw. handelt, ist es offensichtlich, daß diese Bezeichnungen dazu dienten, die jeweils gemeinte und verordnete offizinelle Pflanze oder Droge anderer Art *vor dem profanen Blick der Wißbegierigen zu verschleiern*.” (Köcher 1995, 204)



The argument, as we will see, presents some difficulties, which will be analyzed, together with other problems, in the next section. In particular, my observations will touch upon 4 points:

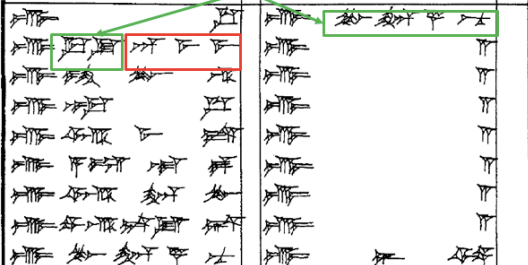
- A. The evidence used to support the equivalence of *aš* with *pirištu*.
- B. The Colophon of Uruanna.
- C. Where these names occur in the medical literature.
- D. Eventual parallels to this list in the Ancient World.

### Problems with the “secret” theory

Since the publication of Köcher’s article in 1995, various internal inconsistencies have become evident with his theory, such as the presence of some names of drugs in *both* column A and in column B, as in the case of *išbaltu*-grass or of *lišān kalbi*, dog tongue:

U3 64 (60): Drug <i>išbaltu</i> -grass		<i>aš</i> wing of a black raven <sup>11</sup>
U3 105 (100): Drug <i>šamušūru</i>		<i>aš</i> <i>išbaltu</i> -grass <sup>12</sup>
U3 9 (9): Drug <i>bu’šānu</i>		<i>aš</i> dog tongue <sup>13</sup>
U3 9a: Drug <i>armēdu</i>		<i>aš</i> dog tongue <sup>14</sup>
U3 38 (36): Drug dog tongue		<i>aš</i> bat head <sup>15</sup>

If we look up the same drug (for) *bu’šānu* (U3, 9) in other tablets of Uruanna to check what its substitute names (or synonyms) are there, we do find the presence of the animal element “dog,” although not in an exact way. In Uruanna II (KADP 11 48ff.), for example, the plant/drug *bu’šānu* is paired with “dog of Gula,” but never with “dog tongue” (or “dog fly,” its equivalent in U3 10).

Uruanna III	9 (9)	Drug <i>bu’šānu</i>		<del>AŠ dog tongue</del>
	9a)	Drug <i>armēdu</i>		<del>AŠ dog tongue</del>
	10 (10)	Drug <i>bu’šānu</i>		<del>AŠ dog fly</del>
Uruanna II:	49			
	51			
	53			
	55			

At line 42, the situation becomes even more complicated: the same ingredient name, “dog tongue,” is paired with more than one name, *both to the left and to the right*:

U3 42 (39): Drug <i>nikiptu</i>		<i>aš</i> dog dung, dog tongue: <i>aš</i> dog bone <sup>16</sup>
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In a case like this it would be difficult to explain the drug names as *Geheimnisnamen*, as their presence on both sides of the equation makes it impossible to determine what is secret and what is not.

<sup>11</sup> GiŠ *iš-bab-tu*<sub>4</sub> | AŠ Á BURU<sub>5</sub> GE<sub>6</sub> [KADP 12, 52; Sm 1701,15; CT 14, 10 (K 4218a):12; K 4152+, 24].

<sup>12</sup> GiŠ *ša-mu-ši-ru* | AŠ *iš-bab-tu*<sub>4</sub> (KADP 12 ii 2; KADP 19 ii 19; KADP 20, 7; Sm 1701 ii 4)

<sup>13</sup> Ú *bu-u’-šā-nu* | AŠ EME UR.GI<sub>7</sub> (KADP 13, 9 and K 4163, 9).

<sup>14</sup> [GiŠ *ar-me-d*]<sub>i</sub> | AŠ [EM]E UR.GI<sub>7</sub> (KADP 12, 8). The restoration is supported by KADP 27, 16, where Ú *ar-me-du* is paired with Ú *bu-u’-šā-nu*.

<sup>15</sup> Ú EME UR.GI<sub>7</sub> | AŠ SAG.DU *šu-ti-ni* (KADP 2 iv 1, and KADP 12, 30).

<sup>16</sup> Ú *ni-kip-ti* | AŠ ŠE<sub>10</sub> UR.GI<sub>7</sub> EME UR.GI<sub>7</sub> : AŠ GİR.PAD.DU UR.GI<sub>7</sub> (KADP 2 iv 6-7; KADP 12, 33; KADP 17, 4-5).



Another difficulty was identified in the fact that some entries in the list replicate (although usually with slight differences) lines from other tablets of the Uruanna series, namely tablets I and II, which are considered preserving normal lists of synonyms or substitute ingredients, once again raising questions in regards to their supposed secrecy. Below are examples of entries of this kind:

Uruanna III 60 (56):	mun <i>eme-sal-lim</i>	aš <i>šadānu šābitu</i> <sup>(na<sup>4</sup>ka.gi.na dib.ba)</sup>
Uruanna II 560:	mun <i>eme-sal-lim</i>	mun <i>kur-e</i>
Uruanna III 89 (84):	giš <i>iš-bab-tu<sub>4</sub></i> kiri <sub>6</sub>	aš <i>a-na-pu-u</i>
Uruanna II 339:	ú <i>iš-bab-tú</i> <sup>giš</sup> kiri <sub>6</sub>	ú <i>a-la-pu-u</i>
Uruanna III 100 (95):	ú <i>ku-si-pu</i>	aš <i>ga-la-lu</i>
Uruanna II 32:	ú <i>ka-si-bu</i>	aš <i>ga-la-lu</i>
Uruanna III 114 (109):	giš <i>tu<sub>9</sub>.nim</i>	aš <i>saḥar ḥa-lu-la-a</i>
Uruanna I 462:	ú <i>ud-ti kaskal</i>	ú <i>ḥa-lu-la-a</i> <sup>17</sup>

Because of these and other shortcomings, the secrecy theory began to receive some skepticism. Leading the way was James Kinnier Wilson, who in 2005 pointed out the difficulty in clarifying “the exact nature of the secrecy” (p. 48) and noticed how some of the so-called *Decknamen*, could originate from riddles, word-plays, or could simply be popular names, interpreting *pirištu* as an *alternative*. Many scholars have since adopted, in various degrees, Köcher’s suggestion or Kinnier Wilson’s suggestion, but the interpretation of a single aš sign as *pirištu* has never been questioned; while the complexity of the material also contributed to the deadlock.

#### A. Evidence used by Köcher to support the equivalence aš = *pirištu*

##### *Evidence from lexical lists:*

As introduced above, Köcher’s entire argument was built on the premise that the sign aš/dili could be translated as “*pirištu* / secret” based on the evidence he found in two lexical lists. The first of these two lists, Antagal B:229 (MSL XVII: 194), is well preserved, and both the tablet and the edition clearly show that the sign aš/dili is not alone, but it is preceded by sag: “sag.dili | *pi-riš-tum*,” and thus this example cannot be used as evidence.

In the second list, Izi E:195a (MSL XIII: 189), one aš/dili stroke is preserved as equivalent of *pirištu*, but the left corner of the tablet is broken: “[... d]ili|*pi-riš-tu*,” hence the absence of other signs is merely assumed in the lacuna.

Therefore, out of the two examples, we can possibly consider only the second one, and even that one, only works assuming that dili was not preceded by anything else. In conclusion, Köcher’s interpretation of aš as *pirištu*/secret in Uruanna III was based on a single, reconstructed, occurrence.

##### *Examples from the recipes:*

To strengthen his case for the reading of the substances in column B as *Geheimnisnamen*, Köcher also provided four examples of medical recipes with duplicates, each mentioning a *secret name* in place of the name of a more common drug in the duplicate recipe (Köcher 1995, 204). The examples he selected, however, are problematic. To begin with, three of them (No. 1, 2 and 4) present a supposed *Geheimnis-/Deckname* that is not even listed in the third tablet of Uruanna as an aš-term.<sup>18</sup> Consequently, we cannot exclude that those names may

<sup>17</sup> Cf. KAR 92.2: “Ú UD-ti KASKAL SAḤAR *up-pat-ti*” and Hh XIV 333: UB.PAD = *ḥa-lu-la-a-a*.

<sup>18</sup> Ú *biššūr atāni* (example No. 1) is not listed in the AŠ section of Uruanna and is preceded by the determinative Ú, not AŠ. *Eper asurrē* (ex. No. 2) is also absent from U3 (although it sounds fairly similar to another one of the ingredients, SAḤAR KÁ.GAL *ka-mēti* “dust of the outer city gate” (l. 48). *Šinni pīri*, elephant tusk, or ivory (example No. 4), as admitted by Köcher, is an ingredient name that is not attested in any list, and thus neither in Uruanna III.

have designated alternative/substitute substances, or simply been synonyms, just as it happens with other descriptive names preserved by tablets I and II of Uruanna.

Out of the four examples, the only one that could possibly be used as evidence is example N° 3, where the *Geheimnis-/Deckname eṣēm̄ti amēlūti* is indeed mentioned in the aš section of U3, specifically at Uruanna III 40,<sup>19</sup> paired with “shepherd staff (*ḥaṭṭi rē'i*).

U3 40:      ú ḥaṭṭi rē'i(níg.gidir)<sub>Sumerian</sub><sub>šu-me-riù</sub> | aš ešēmti(gir.pad.du) <sub>Sumerian</sub> amēlūti([lú])  
              “shepherd’s staff” | aš human bone ”

According to Köcher's explanation, *eṣēmti amēlūti* "human bone" would thus be the *secret* name of *ḥaṭṭi rē'i*. To prove the point, the example refers to one recipe, reported both in BAM IV 323:75-78 and BAM 471 iii 17-20. In the first of these texts, the "secret name" *eṣēmti amēlūti* is listed right after *bīnu*-tamarisk; in the same position, that is right after *bīnu*, the second text is unfortunately broken. Köcher thus explains that in the broken spot of this duplicate text (of BAM V 471 iii 19) must have been the "non-secret" name of *eṣēmti amēlūti*, which as we saw, according to U3, is *ḥaṭṭi rē'i*. If I understand Köcher's reasoning here, he expected *ḥaṭṭi rē'i* to be there because of another list of drugs where "human bone" is paired with "shepherd staff (CT 37 32) and because of the alleged existence of additional duplicates of the same recipe. As it turns out though, the pharmaceutical list in question is a simple list of synonyms or substitute drugs, where both *eṣēmti amēlūti* and *ḥaṭṭi rē'i* are paired (without aš) with at least two other terms each, which would be enough to defeat any attempt at creating an effective secret code. Moreover, any additional duplicate to the recipe (BAM III 221 iii 17 and BAM IV 385 iv 9-10) lists "*bīnu*, *amīlānu*-plant" and not "*bīnu*, *ḥaṭṭi rē'i*."

BAM III 221 iii 17: <sup>giš</sup>*bi-ni* ú lú.u<sub>18</sub>.lu  
 BAM IV 385 iv 9-10: <sup>giš</sup>*bi-[ni]* ú lú.u<sub>18</sub>.lu

Finally, BAM V 471 iii 19, the broken recipe, shows the signs ú l[ú ...] before the lacuna, suggesting that in the reconstruction we should indeed expect the *amīlānu*-plant, in accordance to all the above duplicates. In sum, Köcher's reconstruction of *ḥaṭṭi rē'i* in BAM V 471 iii 19 is not supported by any evidence, and thus this fourth example (No. 3) also does not work. None of the examples provided can therefore be used as evidence to support the claim of secrecy.

*Evidence from the Uruk tablet W 21033, 1 (= BAM IV 409)*

The last piece of evidence offered by Köcher to prove that names in the right-hand column of Uruanna III must be “*Geheimnisnamen*” consists in a Neo-Babylonian tablet from Uruk (W 21033, or BAM IV, 409), listing therapeutic measures to relieve skin ailments.

The text includes a number of ingredient names (8, in the space of ca. 74 lines of text) that have all the prerequisites to pass for good *Dreckapotheke*, which is why Köcher identified them as *Decknamen/Geheimnisnamen*. They are:

Lines:	<i>Deckname/Geheimnisname:</i>
5, 8	<i>mašak imēri</i> , “Donkey skin”
7	<i>eper askuppati abulli</i> (saḥar kun <sub>4</sub> ká.gal), “Dust from a threshold”
9	<i>zappi šahî</i> (šaḥ), “Pig bristle”
12	<i>zê amēlūti</i> (še <sub>10</sub> .nam.lú.u <sub>18</sub> .lu), “Human feces”

<sup>19</sup> The numbering here follows Köcher's numbering (1995, 204). According to my edition (2017) this line would be line 36, and according to CAD's numbering it would be line 34.

16	<i>zê buqli</i> (še <sub>10</sub> munu <sub>5</sub> ), “Chaff of malt” <sup>20</sup>
17	<i>zê summati</i> (še <sub>10</sub> tu.mušen.meš), “Dove dung”
20	<i>šikkû</i> ( <sup>d</sup> nin.kilim), “Mongoose”
Rv. 2	<i>zê šerri</i> (še <sub>10</sub> genna), “Baby’s feces”

Looking like *Dreckapotheke*, however, is by itself not sufficient to demonstrate the assumption that an ingredient name be a *secret* ingredient. If his assumption were proven by other evidence, the identification of the strange ingredients in W 21033 as secret names would come as a mere consequence, but the premises of that assumption, as was shown above, are rather insubstantial. Thus, the alleged *Geheimnisnamen* in this tablet could be undisputed evidence to support Köcher’s theory only if a duplicate tablet were found where those ingredients were substituted with their U3 matching counterpart. Such a tablet, however, is not known.

A specific analysis of the ingredients leads to further observations. Firstly, it is risky to judge an ingredient name to be a *Deckname*, and even less a *Geheimnisname*, because it *looks* like one. We do not know whether an ancient reader would have recognized a certain ingredient name to be a coded name until it is made plain, or it is otherwise evident, and our selective discretion is no infallible tool. For example *zappi šahî* (šah), “pig bristle” (line 9 in W 21033) is presented by Köcher as a secret name, even though it is not listed in the *aš* section of U3, allegedly because it is *similar* to one of those *aš*-names.<sup>21</sup> Five, out of the eight examples provided by Köcher, are actually *not* in the *aš* list, although they are similar to some that are.<sup>22</sup> If, however, we were to follow the same line of thought, that is the similarity procedure, “fat from the kidney of an ox” (line 7 in the Uruk tablet W 21033), which is an animal-based ingredient also extremely similar to the *aš*-name “fat from the kidney of a sheep” [U3, 135 (130)],<sup>23</sup> should also have been listed by Köcher as a *Deckname*. Yet it is not. Naturally there is a good reason for this, which is that fat from the kidney of sheep/cows (tallow), is a perfectly good ingredient for skin treatment, and as such it is still used today. Thus we recognize the expression as referring to a legitimately healing substance and we accept it as such. Did the ancient practitioner recognize some value in (the ashes of) *pig bristle* too, some value that perhaps we cannot see? Or could have *pig bristle* simply been a plant vernacular name?

Besides “pig bristle,” two other ingredients identified as *Geheimnisnamen* (*mašak imēri*, donkey skin, and *šikkû*-mongoose) were not used in their natural state, rather what was employed was their ashes. The physician was supposed to sprinkle these three ingredients on the patient’s affected area only after he had *charred and pound* them (“*turrar tasāk tazarru*”), meaning the therapeutic substance used was *ash*. At first sight, the action might sound puzzling, but ashes are traditionally used to make soap and, either alone or in combination with soil, they are still today used by rural communities where soap is not available for dry hand-washing.<sup>24</sup> Because of their antiseptic powers, the sprinkling of ashes on the surface of

<sup>20</sup> This is not even a “strange” name. The logogram, ŠE<sub>10</sub>, elsewhere read as “dung,” can here be understood as referring to the “powder,” or “chaff” (*apud* Borger, 1998, 821–822) of malt; it could even be used as ZÌ, flour (for ZÌ.DA, *qēmu*), thus referring to “malted (barley) flour.” Cf. Köcher BAM 124 iii 44–45 // 125 1–22 where a list of KUS is summarized as *naphar*(PAP) 46 ZÌ.DA.MEŠ.

<sup>21</sup> Lines 26a and 52 (49): Drug <sup>u</sup>*elkulla* | AŠ “wool of an unmated kid/wool of a virgin ewe.”

<sup>22</sup> The other ingredients identified by Köcher in this medical text as *Decknamen/Geheimnisnamen*, based on their *similarity* with names in the AŠ section of U3, are (besides the one discussed above): *mašak imēri*, donkey skin; *eper askuppati abulli*, dust from a threshold; *zê summati*, dove dung; and *zê šerri*, child excrements.

<sup>23</sup> U3 135 (130). <sup>gi</sup>AMA.A.NI | AŠ Ì.UDU ELLAG<sub>2</sub> UDU.NITA<sub>2</sub>-e (Drug *amannu* | AŠ fat from the kidney of a sheep).

<sup>24</sup> Cf. Hoque 2003, 81: “Experimental trials showed that use of soap, ash or soil gave similar results when women washed their hands under the same conditions.”

the ill spot, in the treatment of skin conditions, seems a quite reasonable action.<sup>25</sup> Indeed it is in line with the previous steps taken by the practitioner, whose first actions had been to wash the patient's *simmu* and anoint it with oil (cf. W 21033, ll. 3-4).

The ingredient *eper askuppati abulli*, “dust from a threshold” (l. 7), is also pound and sprinkled, but this time, presumably because it is already *dry*, it is not charred, which goes to show that, at least in this case, the ingredient is prepared and applied according to the nature of the substance denoted by its name.

To continue with Köcher's examples, two additional *Decknamen* (*mašak imēri* at ll. 5, 8, and *zê šerri*, rev. 2) are, again, not attested in Uruanna III, nor in any other pharmacological list. Thus these substances are nowhere known paired with plant names, which leads to the question as to whether they were employed literally. In this regard it should not be excluded that some of those ingredients could have been considered having some real benefic effect, and consequently been applied as such, as *perhaps* in the case of human (whether adult or baby) feces.<sup>26</sup> The possibility that they may have stood for a vegetable substance is nonetheless always legitimate. No coding list instead points to their secrecy.

Conversely, other *aš*-names occur on the Uruk tablet that are *not Drekapotheke*, and these are ignored by Köcher. For instance, *urnû-mint*<sup>27</sup> (line 32 in W 21033) can be found in the right-hand column of U3 72 (68) as the *aš* equivalent of the “red *urnû*-plant.” It happens to *also* be the equivalent of the *anameru*-plant at U3 85 (80). Consequently, if we were to apply Köcher's reasoning, this name should be marked as a *Deckname/Geheimnisname* for two different plant names; nonetheless, because it *looks* like a normal ingredient to us, and because having a secret name for two different substances does not make sense, it was not marked as such in his edition.<sup>27</sup>

To conclude this section, if the *aš*-names in Uruanna III cannot otherwise be proven to be *Geheimnisnamen*, nothing excludes that they could be used literally, or that they should be interpreted otherwise. They could, for instance, have pointed to an alternative, variant, fanciful, folk, or regional names for plants or herbs, as *zê summati* (“dove dung”) almost certainly was,<sup>28</sup> or they may have derived from puns, misunderstandings, or problematic entries even for **the scribes**,<sup>29</sup> or perhaps a mix of all this.

<sup>25</sup> The use of ashes (derived from wood, charcoal and dried buffalo dung) has also been evaluated as a natural medicine for wound healing in surgically induced wounds. Cf. Shaik & Shaik 2009; the study concluded that “ashes have unique properties to influence and enhance safe and sepsis-free wound healing in the rabbit skin wound model.”

<sup>26</sup> The, perhaps, most revolting-sounding ingredients in the text are “*zê amēlūti* (ŠE<sub>10</sub>.NAM.LÚ.U<sub>18</sub>.LU), “Human feces” and *zê šerri* (ŠE<sub>10</sub> GENNA), “Baby's feces.” Yet it ought not to be excluded that similar substances may have been used *ad litteram* – unless what follows is the result of errors in transmission: in this regard, just a few centuries later, Greek pharmacologist Dioscorides (*De Materia Medica* II 80.5) wrote that: “Fresh human feces, plastered on wounds, maintain them free from inflammation and glue them together, and when smeared with honey on people with inflammation of the throat, it has been reported that they help them.” Galen (*De Simplicium Medicamentorum Temperamentis ac Facultatibus*, Liber X.10 = XII.20 Kühn) was of the same opinion, probably *apud* Dioscorides, and he added that dry excrements of a baby, mixed with Attic honey also help. Was this therapy simply *Drekapotheke*? Were the ingredients vernacular names or *Decknamen*? Or were those expressions “secret” ingredient names? Unfortunately, their presence in this tablet does not prove either point.

<sup>27</sup> Also note the presence in column B of U3 of other, perfectly legitimate, names of plants (such as *lišān kalbi*, root of *baltu*-thorn, pomegranate pip, or papyrus), and of mineral or clay-like substances (such as *kalgukku*-paste, *šīpu*-paste, or *šadānu šābitu*). The presence of these substances raises doubts as to an association between *Drekapotheke*-looking names (even though predominant in the list) and secrecy.

<sup>28</sup> Köcher himself explains (p. 211, commentary to ll. 1–13) that the expression refers to a part or product of a plant, the *gurummaru* (not *gurummadu*!), GĪŠ.GĪŠIMMAR.KUR.RA, which is a kind of tree, lit. “foreign date palm.” See BAM 494 I 36: “ŠE<sub>10</sub> TU.MUŠEN.MEŠ šá GĪŠ.GĪŠIMMAR.KUR.RA ḪĀD.DU-ti.” Also cf. Kinnier Wilson 2005, 49.

<sup>29</sup> I intend to investigate further this hypothesis in a future study.

In sum, the list of ingredients mentioned in W 21033 **that were** identified by Köcher as *Geheimnisnamen*:

- a) includes *Dreckapotheke* names of ingredients that are not present in column B of U3 (e.g. *zê summati*; *zappi šahî*; *mašak imēri*; *eper askuppati abulli*; and *zê šerri*).
- b) does not include other names – legitimate names of plants – that instead are present in column B of U3 (e.g. *urnû*-mint, line 32 in W 21033);
- c) includes substances that could have been applied literally (such as ashes of *mašak imēri*; of *zappi šahî*; of *šikkû*; and perhaps even human excrements);

Accordingly, W 21033 does not add any conclusive evidence to the *Geheimnisnamen* discussion. On the contrary, the general impression one has from reading the tablet is that it was meant to provide quite “informative information,” as accurate and detailed as possible, to the point that some of its recipes even specify dosages.

## B. The Colophon of Uruanna

A second problematic aspect is that no colophon fragment from the tablets of Uruanna suggests a secretive purpose. I report here a couple of passages from these fragments. KADP 1 vii 3, which was a Middle-Assyrian precursor to Uruanna, says for example that its “Tablet 2” was “checked, collated, and in order.”<sup>30</sup> A few other fragments from the Neo-Assyrian colophon report:

“<sup>41</sup> First (var. 10<sup>th</sup>, 12<sup>th</sup>) section (of) Irianna = *maltakal* series. <sup>6)</sup> Assurbanipal, king of the world, king of the land of Assur, checked <sup>2-3)</sup> (those) plants that since ancient times had not been **(properly) edited** in commentaries/lexical lists(?) and explanatory texts; <sup>4)</sup> (he checked) those plants and their equivalents, which had been collected within (them) but <sup>5)</sup> had no ordered section (...),

<sup>17)</sup> (and) he inserted (their names) on the tablets. <sup>18)</sup> He who reads (this tablet) should not treat (it) disrespectfully! He should treat (it) as Nabû gave (it) to him! (...)”<sup>31</sup>

Thus, according to the colophon of the pharmacological series: (a) all entries had been collated from older tablets, had been checked and put in order; (b) those entries included drugs *and their equivalent names*, which evidently had been collected for some time without being systematized. Assurbanipal claims that he (read: “his scholars”) restored this to working order; and (c) the tablets were to be used respectfully. Nothing is there to warn the reader that he should keep this information from indiscrete eyes. What is evident instead is that the scribes were working hard to *reorganize* those names of drugs for a refined edition. Transparency, rather than secrecy seems to be the goal. We should then expect every section of Uruanna, including the *aš*-section, to have received careful attention and to have had a clear purpose.

<sup>30</sup> (KADP 1, vii 3): *ṭup-pi 2 KÁM-ma áš-ra ba-ri-a šal-ma* [Hunger, N° 63].

<sup>31</sup> <sup>1)</sup> *nis-ḥu 1<sup>ú</sup>* (Var. 10<sup>ú</sup>, 12<sup>ú</sup>) *Ú eri-an-na : mal-ta-kal* <sup>2)</sup> *Ú.Ḫ.A ša ina ṣ[a]-a-ti u EME.BÚR<sup>meš</sup> 3)* *ša ul-tu ul-la za-ra-a la šab-tu* <sup>4)</sup> *Ú.Ḫ.A gaba-re-e Ú.Ḫ.A ina lib-bi sam-ḥu-ma* <sup>5)</sup> *la i-šu-ú sa-di-ru* <sup>6)</sup> *mAš-šur-ban-apli ša[r<sub>4</sub> ŠÚ šar] māṭ* <sup>dAššur<sup>ki</sup> is-niq</sup> <sup>7)</sup> *Ú.Ḫ.A gaba-re-e Ú.Ḫ.A ...* <sup>17)</sup> *ina SAG DUB<sup>meš</sup> ú-še-li [...]*. <sup>18)</sup> *a-me-ru a-a iṭ-pil ki-i ša* <sup>dNabu SUM-šú li-pu-uš</sup> (var. DÜ<sup>uš</sup>) (...). See Hunger 1968, N° 321 for sources. For a freer translation of the entire text, see Böck (2011, 692–693): “First (var. third/tenth/twelfth) part of the handbook *uru.an.na* | *maštakal*. It contains drugs, which since times of old have not been systematically redacted in commentaries and explanatory texts. Assurbanipal, king of the universe and king of Assyria, checked all those drugs and their equivalents that had been indiscriminately lumped together without applying any criterion as far as the sequence is concerned and for the first time he methodically arranged these drugs and their equivalents. He removed those entries that appeared two or three times. In doing so, he did not change the old handbooks, but rather followed their old order of entries, then checked and collated them.” [Böck refers, for the original text, to Hunger’s collation (1968, 98–99, N° 321), but notes that his list of texts quoted is not complete].

### C. Occurrence in medicine

If, in spite of all that was argued above, we still wonder whether that purpose may have been the creation of a tool to help scribes code their medical texts (as an arrangement of “secret names” on the right-hand column would suggest), then we should expect most of those names – i.e. the ones in the *aš*-section, and not *similar* names, as no other similar list exists – to appear in the recipes, which were for sure the most valued type of knowledge of the professional medical practitioner. This takes me to my third point, which is the occurrence of the *aš*-names in medicine. What was the practical application of the ingredient names listed in the right-hand column of Uruanna III? Do they emerge in the medical literature? For example, was the first substance listed in column B, *zibbat šikkî* “tail of mongoose”, used as a mixing agent or as a drug in the medical prescriptions, or even in the medical rituals?

U3 1 (1):	ú <i>šu-šum</i>	<i>aš kun</i> <sup>d</sup> nin.ka <sub>6</sub>
	Drug <i>šūšu</i> -licorice	<i>aš</i> mongoose tail

The answer is no. Similar expressions are attested in the literature, for example “flesh of mongoose” is prescribed in BAM 574 apparently as a substitute to *šūšu*-licorice,<sup>32</sup> but, as far as I am aware, “tail of mongoose” is not used in the recipes. The second substance (Uruanna III 2), “dog neck,” is also not used in the medical literature as a drug. Other parts of the dog are attested, but not the neck.

U3 2 (2):	ú <i>bi-nu</i>	<i>aš gú ur.gi</i> <sub>7</sub>
	Drug tamarisk	<i>aš</i> dog neck

Likewise, “anzuzu-spider leg” (Uruanna III 3) is not a known ingredient. In short, just a few of the expressions in column B are known to have been used *medicinally*, that is as drugs in therapeutic recipes (e.g. dog tongue, human bone, some minerals), but most are not. Of the substances that are indeed present in the medical literature, most only appear in *rituals*, or are prescribed as amulets, or even in not-specifically-healing magic. In the medical texts, the so-called “secret names” (the *aš*-names) occur only seldom. It would be useful to analyze one ingredient at the time, tracing its history, as it is difficult to detect any kind of clear pattern in the list, but for the moment we can at least say that it seems odd that such names would be used rarely, especially when *similar Decknamen*, not included in U3, are instead widely attested.

### D. The “Priestly Interpretations” double list

My last point leads me outside of Mesopotamia. While Köcher’s interpretation of this list is today encountering more and more resistance, it still lingers in our thoughts every time we come across *Dreckapotheke* names in the medical literature. The main reason why this idea continues to influence our scholarship is perhaps the existence of an alleged parallel from Greco-Roman Egypt, whose interpretation as a list of secret names is often, in a circular argument, supported by means of Köcher’s explanation of U3, (cf. Fn. 2). This parallel, known as the “Priestly Interpretations” and preserved in the corpus of Greek Magical Papyri (*Papiri Graecae Magicae* XII 401-444, II c. CE), is also a double list. It pairs bizarre names of ingredients on the left (column A) and more normal names of drugs on the right (column B), as from the example:

<sup>32</sup> BAM 574, 8–10: “DIŠ K1.MIN UZU *šikkû*(<sup>d</sup>NIN.PÉŠ. /<sup>d</sup>NIN.KILIM) UD.A *ba-lu pa-tan* NAG-ma TI : DIŠ K1.MIN *šu-ru-uš* <sup>giš</sup>*šū-še* ina A.MEŠ *ba-lu pa-tan* NAG-ma TI” – “If ditto (*suālu* turning into *kīs libbi*), he should drink on an empty stomach dried ‘mongoose meat’ and he will recover : If ditto, he should drink licorice root with water on an empty stomach and he will recover.”

(§1 = l. 408 Betz 1986)	Snake head	: a leech
	Snake “ball of thread”	: this means soapstone
	Snake Blood	: hematite
	Bone of an ibis	: this is buckthorn
(§5)	Blood of a hyrax	: truly of a hyrax
	Tears of a baboon	: dill juice
	Crocodile dung	: Ethiopian soil
	Blood of a baboon	: blood of a gecko
	Lion semen	: Human semen
(§10)	Blood of Hephaistos	: wormwood
	Hairs of a baboon	: dill seed
	Semen of Hermes	: dill
	Etc. etc.	[Tr. Betz 1986, 167-168]

The list presents an introduction, which reads:

Interpretations from the holy writings, in translation, used by the temple scribes. Because of the nosy curiosity of the masses, the scribes inscribed on statues of gods the [names of] herbs and other things which they used, so that, *by [the masses] taking precaution, they do not practice magic at all in an erroneous fashion.*<sup>33</sup> We, on the other hand, have collected the explanations [of these names] from many copies [of the sacred writings], even all of the hidden ones.<sup>34</sup>

While the Greek text is problematic, as it originates from popular “magical” texts, scholars have often translated the sentence in italics as: “so that they [i.e. the masses], since they do not take precaution, / might not practice magic, [being prevented] by the consequence of their misunderstanding” (Betz 1986, 167), and thus have taken this Introduction to imply that temple scribes purposely hid the real substances they used in their rituals under false and misleading names, and that this list of explanations (*hermeneumata*) could be used as a key to understand the coded names in column A. Such an interpretation would sound like the case of our Uruanna III (except in the latter the supposed coded names are in column B). A different interpretation of the line in question, however, would suggest quite a different scenario.

Furthermore, Classical scholarship has recently made a great effort to understand the *Greek Magical Papyri*, and the list of ingredients in the Priestly Interpretations in particular has attracted the attention of many specialists. What the new studies suggest is that the list may not be what it looks like at first glance. The Introduction may not even pertain to the list, but may have been added later to explain those peculiar names of drugs, which at the time of composition no longer made sense to the reader (LiDonnici 2002, 369).

The names in column A (the *Dreckapotheke*), present a very evident Egyptian “flavor” (LiDonnici 2002, 371) and could indeed “introduce a list of pharmacological jargon that was in use among Egyptian priests,” as was argued by Jacco Dieleman (2005, 203). Most likely the jargon would have become known to the composer(s) of PGM XII through such Greco-Roman sources, but Dieleman showed that it occurred in pharaonic medical texts as well. While some of those names were interpreted literally in the Egyptian literature, others presented instead a different connotation, and clearly referred to ordinary herbs and minerals. This is demonstrated by the emergence of seven of the *Dreckapotheke* names, as mentioned in

<sup>33</sup> The Greek text is difficult (it is here translated as a straightforward negative purpose clause introduced by ὅπως μὴ). The only other possibility is to punctuate differently, or ὅπως, μὴ εὐλαβοῦμενοι, περιεργάζονται μηδὲν διὰ τὴν ἐξακολούθησιν τῆς ἀμαρτίας, in which case the μὴ is going with εὐλαβοῦμενοι and makes the participle conditional, or “so that, if they [the masses] do not take precautions, they do not at all practice magic in an erroneous fashion.”

<sup>34</sup> ἐρμηνεύματα ἐκ τῶν ἱερῶν μεθρημνηθέντα, οἷς ἐχρῶντο οἱ ἱερογραμματεῖς. διὰ τὴν τῶν πολλῶν | περιεργίαν, τὰς βοτάνας καὶ τὰ ἄλ[λ]α, οἷς ἐχρῶντο, εἰς θεῶν εἰδῶλα ἐπέγραψαν, ὅπως μὴ, εὐλαβοῦμενοι, | περιεργάζονται μηδὲν διὰ τὴν ἐξακολούθησιν τῆς ἀμαρτίας. ἡμεῖς δὲ τὰς λύσεις ἡγάγομεν ἐκ τῶν πολλῶν ἀντιγράφων καὶ κρυφίων πάντων.



the PGM XII list, in the revision of Dioscorides' *De Materia Medica* (end of I c. CE),<sup>35</sup> where such terms are listed as synonyms to plant names. For example, next to "Dill" one finds the following description of synonyms, some of which correspond with PGM XII, §11-12:

"Manageable Dill: some call it Polyeidōs, others Aniketōn, *the prophets call it Semen-of-a-baboon*, also *Hairs of a baboon*, other *Semen-of-Hermes* (...)." [Dioscorides, *De Materia Medica* III 58]<sup>36</sup>

In the meantime it had been observed that the items in column A do not occur in the recipes of the Greek Magical Papyri, whereas the items in column B do; in other words "the list provides explanations where explanation is not needed, and (despite the claims in the Introduction) it provides mystification rather than clarity" (LiDonnici 2002, 374-375). LiDonnici also established that the list contains copy errors (2002, 373), so that regular and common names of plants would have been misunderstood or misremembered, or copied down wrongly at some point in transmission/translation, transforming perfectly normal names of plants into bizarre (and at times even repulsive) ingredient-names.

For example, (§8) "Blood of a (Hamadryas) baboon, αἷμα κυνοκεφάλου is explained with "blood of a spotted-gecko." As it turns out, the word for baboon here, κυνοκεφάλος, is likely an error for other plant-names that were in fact more common in the magical papyri and in other literature, such as κυνοκεφάλιον or κυνοκεφαλίδιον. Thus, instead of "blood of a baboon" the original entry is more likely to have been "blood/resin of the *cynocephalia*-plant." (LiDonnici 2002, 371-373).

Similarly, "Semen of Helios," γόνος Ἡλίου (§26) would be a mistake for ἡλιόγονος, which together with σεληνόγονος, is elsewhere explained with the convenient statement "these are herbs" (LiDonnici 2002, 373). "Semen of Helios" would then be, once again, a simple mistake for a common name of plant, and not a *Deckname*.

A couple more examples were recently identified by Miriam Blanco Cesteros, who noticed a similar phenomenon at §3, where "Snake blood" (αἷμα ὄφεως) could be a mistake for αἷμα δρακόντιον (or δρακόντειον), "Blood of the Serpent-plant," which was a well-known red resin (2020, 155-159). The name is such to be easily misremembered, but it was not secret at all. In fact, its association with "hematite" (in column B of PGM XII) was already known from Dioscorides (Blanco Cesteros 2020, 158).<sup>37</sup> The same author also discussed § 28 ("Blood?/Semen? of Titan = wild lettuce"), and more examples will probably emerge from the text over time, but the logical conclusion appears to be the same in each of the studies reported above.

PGM XII 401-444 is not a list of secret names and thus, I shall add, it cannot work as a parallel to support Köcher's theory.<sup>38</sup>

<sup>35</sup> In an effort to make Dioscorides's work more accessible, the revision had provided each name entry with a number of synonyms (from other languages, or from other botanical/medical authors), mostly drawn from a lexicographical work "On Botany," written by a certain Pamphilus in the 1<sup>st</sup> c. CE. Pamphilus lived in Alexandria of Egypt, where he compiled several lexical works, among which the "On Botany" in 6 books. In this work he collected lists of plant names, in alphabetical order, and provided them with synonyms, morphological descriptions, indication of their medicinal uses and applications. Unfortunately, little more than the title survives (see Diller 1949).

<sup>36</sup> See Dieleman 2005, 200.

<sup>37</sup> In his description of cinnabar (*De Materia Medica* V 94), which he says some people mistake for "αἷμα δρακόντιον" serpent blood, Dioscorides points out that the resin is a substitute for *hematite* (Gr. αἱματῖτις referred to a red gem in antiquity, and not to the black metallic stone to which the term refers today. Cf. Blanco Cesteros 2020, 158, fn. 40).

<sup>38</sup> In the conclusive words of Blanco Cesteros (2020, 167): "los *Hermeneumata* de PGM/PDM XII (=GEMF 15) no son un listado de nombres secretos (...) como ya demostró Dieleman: las expresiones de una y otra columna son equivalentes (o, al menos, su redactor las consider equivalentes)."

## Conclusions

In sum, the interpretation of the *aš* section of Uruanna III has long represented a conundrum, and still does. In 1995, Franz Köcher argued, in the space of one page, that the sign *aš* must stand for *pirištu*-secret, and thus that the drug names following that sign must have been used to code medical recipes in a way that key ingredients could not be recognized by the non-initiated. Catching two birds with a stone, the idea seemed to offer both an interpretation of U3, and a simple solution to the often puzzling presence of *Dreckapotheke* ingredient names in Babylonian medicine. Whether the practice of coding ingredients was indeed followed, unfortunately, cannot be demonstrated by the evidence presented in that publication.

The present study examined various aspects of the problem, including:

- The evidence used by Köcher to support his argument
- The intentions behind the composition of Uruanna, as described in its colophon
- The occurrence of the *aš*-names in the medical literature
- And a possible parallel from the Classical World

What it determined is that none of those aspects supports Köcher's idea that the *aš*-names of Uruanna III may be *Geheimnisnamen*, thus forming a system of *deliberately* hidden names. This conclusion does not necessarily mean that Mesopotamian medicine did not make use of coded terms (or *Decknamen*), whatever the reason for having a code would have been, and in fact it is likely that it did, especially in the late **Babylonian** period. Ultimately, however, we cannot use the *aš* section of Uruanna III to prove that point.

Yet, all the substance-names listed in the *aš* section of Uruanna have something in common: they are all introduced by the same single horizontal stroke, which must be intentional. Why were they distinguished from the rest of the pharmacopoeia and grouped together? The case is intriguing and at present I am testing a new hypothesis that, if sound, will be published elsewhere. For the time being, however, the question remains open.

## Works cited:

- Barbara S. 2008.** Castoréum et basilic, deux substances animales de la pharmacopée ancienne, in I. Boehm, P. Luccioni (eds.), *Le médecin initié par l'animal. Animaux et médecine dans l'Antiquité grecque et latine*, Actes du colloque international tenu à la Maison de l'Orient et de la Méditerranée (26 et 27 octobre 2006), Lyon, 121-148.
- Bennett B. 2007.** Doctrine of Signatures: An Explanation of Medicinal Plant Discovery or Dissemination of Knowledge?, *Economic Botany* 61/3, 246-255.
- Betz H. D. 1986.** *The Greek Magical Papyri in Translation*, Chicago/London.
- Blanco Cesteros M. 2020.** Los *Hermeneumata* de PGM/PDM XII (=GEMF 15): la *Dreckapotheke* mágica a examen, *CFC (g): Estudios griegos e indoeuropeos* 30, 149-176.
- Böck B. 2011.** Sourcing, Organizing, and Administering Medicinal Ingredients, in K. Radner, E. Robson (eds.), *The Oxford Handbook of Cuneiform Culture*, Oxford, 692-693.
- Borger R. 1998.** The Assyrian Dictionary (Š), *BiOr* 55 5/6 (Boekbesprekingen), 818-824.
- Dieleman J. 2005.** Priests, Tongues, and Rites: The London-Leiden Magical Manuscripts and Translation in Egyptian Ritual, 100-300 CE, Leiden/Boston.
- Diller H. 1949.** Pamphilos, *Paulys Realencyclopädie der classischen Altertumswissenschaft* 18.2, 336-349.
- Geller M. J. 2010.** *Ancient Babylonian Medicine. Theory and Practice*, Ancient Cultures, Chichester.
- Haber T. B. 1963.** Canine Terms in Popular Names of Plants, *American Speech* 38, 28-41.

- Hauenschild I. 1996.** Tiermetaphorik in türksprachigen Pflanzennamen, Wiesbaden.
- Hoque B. A. 2003.** Handwashing Practices and Challenges in Bangladesh, *International Journal of Environmental Health Research* 13, Suppl. 1, 81-87.
- Hunger H. 1968.** Babylonische und assyrische Kolophone, AOAT 2, Kevelaer/Neukirchen-Vluyn.
- Köcher F. 1995.** Ein text medizinischen Inhalts aus dem neubabylonischen Grab, in R. M. Boehmer, F. Pedde, B. Salje (eds.), *Uruk: Die Gräber, Ausgrabungen in Uruk-Warka 10*, Mainz am Rhein, 203-217.
- Kinnier Wilson, J. V. 2005.** Notes on the Assyrian Pharmaceutical Series URU.AN.NA : maštaka, *JNES* 64, 45–51.
- Kreiter H. 1912.** *Die von Tiernamen abgeleiteten Pflanzennamen im Französischen*, Diss. Darmstadt.
- LiDonnici L. 2002.** Beans, Fleawort, and the Blood of a Hamadryas Baboon: Recipe Ingredients in Greco-Roman Magical Materials, in P. A. Mirecki, M. Meyer (eds.), *Magic and Ritual in the Ancient World*, Religions in the Greco-Roman World 141, Leiden, 359-377.
- Marzell H. 1913.** *Die Tiere in deutschen Pflanzennamen: Ein botanischer Beitrag zum deutschen Sprachschätze*, Heidelberg.
- Parpola S. 1993.** *Letters from Assyrian and Babylonian Scholars*, SAA X, Helsinki.
- Rumor M. 2017.** The ‘aš Section’ of Uruanna III in Partitur, *JMC* 29, 1-34.
- Shaik D. M., Shaik H. Z. 2009.** Ash as a Unique Natural Medicine for Wound Healing, *ISRA Medical Journal* 1/3, 72-78.
- Stadhouders H. 2011.** The Pharmacopoeial Handbook Šammu šikinšu – An Edition, *JMC* 18, 3-51.
- Stadhouders H. 2012.** The Pharmacopoeial Handbook Šammu šikinšu – A Translation, *JMC* 19, 1-21.
- Stol M. 2003-5.** Pflanzenkunde A, *RIA* 10, 503b-506a.
- Thompson R. C. 1936.** *A Dictionary of Assyrian Chemistry and Geology*, Oxford.

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