Opium: was it used as a recreational drug in ancient Egypt?

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ABSTRACT

This paper analyzes the existence and use of opium in ancient Egypt, its introduction in the country and references to opium as a medicinal ingredient. Some prescriptions in medical papyri are mentioned as records confirming the application of opium. Objects are mentioned as records of the drug presence in Egypt. Whether it was used only as a medicine but also as a recreational drug is here discussed. The attempt to date the introduction of the Papaver somniferum L. plant in ancient Egypt is also developed. Scientific data were consulted, but it is needed to note that some authors present different views. Nevertheless, this paper suggests that opium may have been introduced in ancient Egypt in the New Kingdom (c. 1550-1350 BCE), although records for the commerce of the drug may point to the end of the Ptolemaic Period, influencing Greek medicine and expanding its use throughout the Roman Period onwards.

KEYWORDS

Opium, ancient Egypt, medicine, plant
1. CERTAINTIES ABOUT OPIUM HISTORY IN BRIEF
AND IN ANCIENT EGYPTIAN CONTEXT

The majority of medical prescriptions in ancient Egypt used vegetable ingredients, aside from minerals, human secretions and animal contributions as well. Some of the plants used to extract these prescriptions’ ingredients were indigenous to Egypt, others were not. The artifact which began this investigation is a ceramic jug in the shape of a poppy, on display in the Science Museum in London (a Base ring juglet, probably from Cyprus1, circa 1550 BCE, unknown maker, inventory n. A170473)2. Theory stated that opium was dissolved in water or wine and then exported in jars. The opium poppy plant was not indigenous to Egypt3, so Egyptians presumably began to cultivate the *Papaver Somniferum* plant later on, around Alexandria, in the Ptolemaic Period4 (a note about *mekonion*, made from the plant leaves and fruits, a less potent drug than opium). From texts and artifacts we have a visual impression of how the ancient Egyptians unconventionally illustrated their plants as compared to modern botanical drawings. However, no use of a drug such as opium for recreational purposes is anywhere suggested in ancient Egyptian literature. We can surmise that the plants’ active substance was among important ingredients probably only in medicine and magic in ancient Egypt.

Active substances of plants such as opium were almost for sure discovered by means of experimentation. Their effect on human health either in medical or therapeutic context, as magic, was an important part of medicine, and it is mentioned by classical authors such as Dioscorides5.

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1 In a 2009 conference where Michaelides submitted a paper about Medicine in Ancient Cyprus he stated that neither *Papaver somniferum*, nor opium have been found in archaeological contexts, as belonging to a Cypriot medical tradition, but that it is generally accepted, that in the Late Bronze Age (1600–1050 BCE), Cyprus produced and exported opium. A large number of vessels of Base Ring Ware with the shape of the poppy capsule have been found in the Eastern Mediterranean, Michaelides, 2009: 99, and, for the interest of this paper, in Egypt.

2 There is also a base-ring I juglet from Memohis at the Otago Museum in Dunedin, New Zealand, published by Aström and Anson, that can be added to the ones inventoried by Merillees. More imported Cypriote vases such as this registered to have been found in Egyptian territory (Tell el- Dab’ a, Memphis, Saqqara, Sedment), Åström, and Anson, 2007: 44.

3 Nunn, 1996, 155; Newberry mentions that the poppy ‘was already found in the corn fields of the Fayum as early as the XII Dynasty’, Newberry, 1900: 145.


5 *De Materia Medica*, being an herbal with many other medicinal materials written in Greek in the first century of the common era; a new indexed version in modern English, 2000, IBIDIS Press, South Africa; Dioscorides called the red poppy ‘mekon roias’ (from rhoeas which means to fall in Greek, as the latex drops rapidly), Rosso, 2010: 84.
The ancient Egyptians may have known about the plant properties from their neighboring peoples, and may have used it as a sedative, consumed either with beer or wine, as they did with mandrake.

The *Papaver somniferum* is an annual plant[^6] of a green-blue color with very showy flowers, red, purple or white colored. The fruit is a capsule, crowned by a disc formed by stigmas. Its latex, the opium, has more than 20 alkaloids, most of those used in medical field, being morphine, papaverine, thebaine and codeine the most frequently used in pharmacy. Just as Dioscorides describes[^7], the latex extracted from the unripe fruit of *Papaver somniferum* poppies, produces a resinous substance, the base for analgesic/sedative drugs such as morphine and the ones mentioned above. He also mentions which types of illnesses where treated with the ‘medicinal poppy’; such as lack of sleep and erysipela[^8]. The use of poppy juice and lettuce latex combined seemed to be another popular remedy for ailments in antiquity[^9].

It is a domesticated annual plant, with an unknown wild progenitor, that spread from Asia Minor, perhaps early in the fourth millennium BCE. Botanical studies have confirmed that the original home of the opium poppy was the Anatolian south coast of the Black Sea, rather than the northern eastern Mediterranean coast[^10].

The Sumerians, who called it the joy plant[^11], grew it by 3400 BCE, probably infusing the capsules, in water, mead, or wine to produce the analgesic tea the ancient Greeks called *mekonion*, already mentioned above[^12]. A piece of evidence for the use of opium by the Sumerians is a tablet of medical prescriptions found at Nippur, (2100 B.C.E.) containing a cuneiform ideogram “hul-gil”, translated as “joy plant”[^13]. The “joy plant” translation is refuted by Krikorian[^14].

In *La Flore Pharaonique* (Loret, 1887 a), both *Papaver* are mentioned as existing in Egypt, *Papaver somniferum* being sustained by Pliny’s work[^15] that

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[^6]: A plant which is native to the Mediterranean Basin, Southeastern Europe, and Western Asia; thriving in sunny, dry areas.
indicates opium to be known to the ancient Egyptians, and *Papaver rhoes L.* confirmed to still exist around Alexandria, that blossoms in March and April each year, having been discovered in mortuary garlands such as the one from Princess Nesi-Khonsu (22nd dynasty)\(^{16}\). The species of *Papaver* used in gardens, the *Papaver rhoes L.* (red poppy), was found in a vase that has been discovered at the tomb of Kha at Deir el-Medina in Egypt, c. 1500 BCE\(^{17}\). In this one, tests were inconclusive in finding alkaloid presence\(^{18}\).

2. MEDICINE, POISON, OR DRUG, EGYPTIAN OR GREEK, DID *KYPHI* INCLUDE OPIUM?

The pharmacopoeia of ancient Egypt in Ptolemaic times had for sure novelties brought by Greek physicians, and some of them emphasized plant properties for their medicinal qualities, but also for their magical characteristics, thus giving them superior powers of healing. For instance, Herophilus said that drugs are not anything per se\(^{19}\). The word pharmakon could meant medicine, venom or magic, spell or incantation, and also “what casts away disease” as described by Homer. This drug, nëpenthes pharmakon (Greek), mentioned in Homer’s Odyssey is something that leads to the forgetfulness of pain and sorrow, referred to as having its’ origin in Egypt, and literally meaning ‘no more pain’ - (ne = no, penthos = pain, sorrow). In the Odyssey, nëpenthes pharmakon is a magic potion given to Helen by an Egyptian queen, Polydamma; would it have opium (poppy juice) as an ingredient?

The composed Kyphi\(^{20}\) kAp.t nfr-nfr, two times good\(^{21}\), or in another version\(^{22}\), kAp.t nfr-nfr, again, two times good\(^{23}\) is made with vegetable ingredients; honey, possibly grape wine, attested to be ‘oasis’ wine\(^{24}\), then manufactured into pastilles to be burned; but its ingredients in prescriptions

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\(^{16}\) Loret (a), 1887: 51.  
\(^{19}\) Von Staden, 1989: 400.  
\(^{20}\) kApt according to Helck, LÄ III, 1980: 902; To be burnt in the house for fumigation of textiles and air (pEbers, 98, 12), to wash the mouth (pEbers, 98, 14b), to expel demons that cause disease (pBerlin 3038, 6,6), further applications in temple rituals also described summarily in Helck, LÄ III, 1980: 903.  
\(^{21}\) Loret (b), 1887: 14.  
\(^{22}\) Lüchtrath, 1999: 97.  
\(^{23}\) Lüchtrath, 1999: 97.  
\(^{24}\) Lüchtrath, 1999: 104.
vary in authors (sixteen to Egyptians and eleven to Greek), widely used in Greco-Roman times in Egypt as attested by texts in temples. There are only three Egyptian recipes (two at Edfu, one at Philae), and, Loret, who studied the transcriptions of the originals made by Dümichen and Champollion, said that none contains poppy juice or opium. Loret also mentions that Galen wrote about kyphi being administered as a beverage to internal organs’ ailments (liver and lungs); was it a pain reliever? The probability of it including opium and be used as a recreational drug is uncertain, and probably inexistent, but still worth mentioning.

3. EBERS PAPYRUS’ REFERENCES (P.EBERS)

At Sennedjem’s tomb (TT1), at the east wall of the chamber, in the ‘fields of the netherworld’, a lower register divides two margins with an irrigation channel; an upper margin with an orchard shows date palms (*Phoenix dactylifera* L.), doum palms (*Hyphaene thebaica* L. Mart.), and fig sycomores (*Ficus sycomorus* L.) bearing fruit, and a lower margin shows a flower garden with red poppies, (*Papaver rhoeas* L.) blue cornflowers (*Centaurea depressa* Bieb.) and yellow mandrakes (*Madragora officinarum* L.).

Merrilees mentions an opium poppy head found at Deir el-Medina’s tomb 1389, as the earliest proof of poppy presence in Egypt, but we must consider the possibility of the tomb having been vandalized, and thus, the specimen being a late inclusion. About 1450 BCE opium is generally considered for its medicinal applications, as stated in pEbers 782, in a prescription for an infant colic (as a pain reliever).
Not only is the poppy mentioned as a sedative, but the same prescription (pEbers 782) is literally said to be used for stilling the pain ‘which is caused by worms in the intestines’.

Both $\textit{spn}$ and $\textit{spnn}$ names appear in medical papyri, notably pEbers. The shepen plant, $\textit{spn}$, intentionally identified with the poppy, is mentioned in other prescriptions such as pEbers 440, 443 and 445 for hair treatment; pEdwin Smith 41 and 46, to treat some kind of chest abscess, fever or burning ache. The word $\textit{spn}$, a generic name for both $\textit{Papaver Rhoeas L.}$ and $\textit{Papaver Somniferum}$, uses a live plant determinative ($\textit{Spn}$); we believe this may imply that the Egyptians knew it as a cultivated plant. The word used for the flower, seed or capsule was $\textit{spnn}$, but the word used for the flowers of the red poppy was $\textit{spnn-dSr}$. This explains the different etymologies.

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34 Breasted, 1930: 378-383; case 41, XIV, 6, a treatment that includes an ingredient translated by Breasted as red $\textit{spnn}$ in page 379, translating as red poppy plant; in page 383 Breasted fails to identify the plant; although he understands that the prescription uses the part of the plant, and that it also occurs in other medical prescriptions (in Ebers and Edwin Smith papyri).
36 Personal communication by Dr. Gabra.
used in medical papyri, all derived from the špn. The knowledge of opium as a substance commercialized in jugs from the Mediterranean maybe not be the same of a living, cultivated plant that produces the known substance in jugs. Manniche refers the špn as being cultivated in Egypt and Prospero Alpini said “it stimulates men in war and love.” One thing poppy juice cannot do is stimulate as its’ alkaloids induce sleep. Germer says that špn is not opium: a critical view. Germer stated that a single paragraph in the pEbers 782, the prescription for an infant colic mentioned before, shows little knowledge about the applications of opium by the ancient Egyptians. It is not even listed in the Vindob Papyrus (D 6257), a list of Egyptian drugs from the 2nd century, when Greeks and Romans were acquainted with this drug’s use.

4. BASE RING JUGLETS

Another researcher of opium traces opium original precedence back to Cyprus and its trade, importing the jars into Egypt in the New Kingdom. He compares the opium poppy image to the containers, called Cypriot Base-Ring I juglets or ‘bilbils’ form, appearing in Egypt in the first half of the 18th Dynasty. More recent scientific tests detected morphine traces in the Cypriot vases, which can substantiate Merrillees’ theories based on macro observation of the pottery which were modeled to resemble the opium poppy as to indicate their content.

37 Manniche, 1989: 130.
38 An Italian botanist who travelled to Egypt in order to extend his knowledge of exotic plants, (1580). He was a physician to George Emo, Venetian consul in Cairo.
39 Nunn, 1996: 156.
40 Germer mentions that without a chemical analysis, only macro-observation is not enough to say opium was present or that the vase contained opium and I agree, Koschel, 1996: 160.
42 A recipe containing opium and found in Egypt is described in Papyrus Oxyrhynchus 234, a fragment of a treatise on medical prescriptions by an unknown author, written in Greek and dated to the second or third century. Currently housed in the library of the University of St Andrews in Fife; published in 1898 by Grenfell (see bibliography below).
43 Nunn, 1996: 156.
45 Allen, 2005: 46.
48 Most recently there were four Base Ring I juglets found in a Late Bronze IIA (14th century BCE) context at Tel Beth-Shemesh, Israel (2008), and those were submitted for
In prehistoric Greece, no written data exists concerning the use of opium as a recreational drug, but a number of small jars were found in Minoan Crete; probably containing medicinal opium\(^{49}\).

The definition of these jars as being containers for opium is given only by macro observation of the shape and decoration of the jars, but also by the existence of a ‘goddess of poppies’ showing hairpins shaped as poppy capsules from *Papaver somniferum* (second half of 14th century BCE). Also in Mycenaean civilization some jewelry pieces show that they must have known the plant and maybe considered it as divine\(^{50}\). To the Greeks, the poppy belonged to three gods; Thanos (death), Hypnos (sleep) and his son Morpheus (dreams)\(^{51}\).

5. OPIUM AS A MEDICINE

The ancient Egyptians probably used the opium poppy latex as medicine only, as both *Papaver somniferum* (poppy, 30% alkaloid) and *rhoeas* (common red poppy, 42% alkaloid) were cited in medical papyri continuing to the Greco-Roman Period\(^{52}\). Later on, in Coptic and Arabic writings, opium is used only in medicinal prescriptions. Schweinfurth, more restrained in his opinion, holds that the poppy was introduced into Egypt only shortly before the Roman era\(^{53}\). In fact iconographical descriptions such as the imported residue analysis at the University of New York at Albany, considering they were already contaminated, degradation suggesting they were used to contain a medicine oil made with other plant ingredients, so, no remnants of opium were found, Chovanec et al, 2015: 175, 180-185. This proves the difficulty to scientifically find residue of opium in such ancient recipients, probably re-used more than once in antiquity (until they broke).

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\(^{50}\) Askitopoulou et al, 2002: 23.

\(^{51}\) Wink, van Wyck, 2008: 20.

\(^{52}\) Boekhoud, 2003: 296; at the city of Oxyrhynchus, in the documents found, there is a papyrus fragment, (Papyrus Oxyrhynchus 234 - P.Oxy. 234 or P.Oxy. II 234) dated to the third century, CE, showing part of a prescription where *mekonion* is referred to be taken in with raisin wine (currently housed in the library of the University of St Andrews in Fife, Scotland, published in Grenfell, B. P.; Hunt, A. S., 1898, Oxyrhynchus Papyri II, London: Egypt Exploration Fund. pp. 134–136. Another fragment, now owned by the Egypt Exploration Society and kept at the Sackler Library at Oxford University, and thought to be a treatment for rheum, a discharge of mucus from the eyes, using several vegetal ingredients, mentions, among those, the, poppy juice: http://www.livescience.com/50544-ancient-hangover-cure-discovered.html

\(^{53}\) Petrie, 1890: 47; Rohlfs, 1876 : 63; Löw describes the *Papaver Rhoeas* as the field poppy, and says the Arabs call it ‘father of the pharaoh’, Löw, 1924: 363; Schweinfurt refers the *Papaver somniferum* L. as being represented in images/depictions from ancient Egypt, but stating this plant was known in Egypt from Roman times onwards, Löw, 1924: 528-529. Items found that represent poppy capsules are the earrings of queen Tawseret
plants in the so-called ‘botanical garden’ of Tutmose III in Karnak do not show *Papaver spp*.

Even so, art depictions that may portray poppies are not indicative of the use of their latex for recreational uses. The knowledge of the existence of opium as a substance inducing sleep or numbness should be considered for medicinal purposes, or we would have references to such ‘altered states’ in ancient Egyptian literature.

6. GREEK TO COPTIC TO ARABIC

Galen, who spent some years in Alexandria, mentions the ‘addiction’ of Marcus Aurelius to opium and writes that the preparation of opium had been taught to mortals by the Egyptian god Thoth, who in later years was called Hermes Trismegistos. Galen also mentioned cooling substances, among those was opium (XIII, 155) and poppy (I, 649, XI, 404, 421, 596, 603, 751), used to

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54 Koschel refers that the vessels studied by Merilees dated from the Second Intermediate period and the reign of Thutmose III, Koschel, 1996: 159.


induce sleep, but in small doses.\textsuperscript{57} As the word for opium is written in Greek, ὀπίον, the use of opium seeds becomes entirely credible, in the Greco-Roman papyri of Oxyrhynchus\textsuperscript{58} and Zenon\textsuperscript{59}. Petrie\textsuperscript{60} refers weed-seeds were found among barley grains, among those some thought to be poppy seeds (Papaver rhoeas L.); it is asserted then that the cultivation of the poppy was widespread in Egypt.

According to Gabra\textsuperscript{61}, the poppy referred to as špn and its description coincides with that of the Coptic medical papyrus, known as the Chassinat papyrus\textsuperscript{62}, where opium is mentioned twenty-two times as being used mainly for external treatment in the form of eye-drops, ointments, or powders.

In his conclusions, Gabra mentions that the use of the products of the poppy continued throughout the centuries and that the term opium was adopted by the Copts. Opium was a famous drug in Egypt, where many districts were noted for its preparation (in the Coptic Period)\textsuperscript{63}.

Cultivation of poppy in Egypt developed during the Arab period (7th century), it was cultivated in Alexandria. Wilkinson\textsuperscript{64} reports opium in Egypt sown end of November and seeds ripe in April, its name in Arabic being aboonôn (father of sleep). Also according to Gabra, the poppy plant was cultivated in Egypt for medicinal purposes as late as 1914.

\textsuperscript{57} Rosso, 2010: 85.
\textsuperscript{59} pMichigan 26, 46, I, Zenon Papyri, Edgar, C., C., (ed.), 1931, Ann Arbor, Univ. of Mich. Studies, Humanistic Series 24, University of Michigan Papyrology Collection, n. 26-Letter from Zoilos (?) to Panakestor, concerning some quantity of hay seed, that he has perhaps delivered to Panakestor’s agent, and black poppy seed that he will send him if he can find it: http://papyri.info/ddbdp/p.mich;1;26?rows=3&start=20&fl=id%2Ctitle&fq=series%2Cid%2Ctitle%2Cvolume%2Citem%2Csort&q=26-Letter+from+Zoilos+to+Panakestor&n=46 (Letter to Zenon from Pyron, an accountant in his service, requesting an advance of money, to buy poppy seed and sell it at a profit, and the loan of a parcel of land, to have wheat of his own: http://papyri.info/ddbdp/p.mich;1;46?rows=3&start=39&fl=id%2Ctitle&fq=series%2Cid%2Ctitle%2Cvolume%2Citem%2Csort&q=46-Letter+from+Pyron+to+Zenon)
\textsuperscript{60} Petrie, 1890: 50.
\textsuperscript{61} Dr. Saber Gabra presented a PhD thesis in 1950 about drugs in ancient Egypt, at Cairo University, being himself a pharmacist at Cairo University Hospital; this work is now being revised edited and updated for publication by Dr. Gamal Saber Gabra to whom I owe my thanks for his notes on the therapeutic use of drugs in ancient Egypt, with special reference to the Papaver plant, kindly made available to me before publication.
\textsuperscript{62} Chassinat, E., (1921) Le papyrus médical copte N°32, MIFAO, Le Caire.
\textsuperscript{63} Gabra, 1956: 40.
\textsuperscript{64} Wilkinson, 1853, Volume II, Chapter VI: 22.
7. SCIENTIFIC ANALYSIS IN ANCIENT EGYPTIAN MATERIALS

The confirmation of the existence of opium in ancient Egypt has to be substantiated by scientific evidences.

Koschel also tested a vase in the Martin von Wagner-Museum from Universität Würzburg (inv. Nr. A39) which contained a resinous substance mixed with quartz and grains. The opium components were degraded and oxidated, but in this case, 0.1% of opium alkaloids were present, the main component being morphine (0.05% in this sample)\(^65\). More samples are needed to establish a generalized conclusion.

In the work of Counsell several techniques were used to test traces of opium in both material and human remains\(^66\).

Several methods were used; radioimmunoassay\(^67\), gas/liquid chromatography, chemical analysis using chromatography on both *Papaver* samples, as both can produce morphine\(^68\). They also used mass spectrometry with GC or LC, and human samples that can be assessed to search for opium traces such as tissue, hair, teeth, bone marrow; the closest to a blood sample that can be retrieved from mummified or skeletized human remains, protected from contamination\(^69\). From this testing done by Counsell\(^70\) that includes previous testing on Cypriot pottery, none of the samples tested positive for any alkaloid that can be traced to the opium poppy\(^71\).

8. CONCLUSIONS. DID OPIUM REALLY EXIST AS A RECREATIONAL DRUG IN ANCIENT EGYPT?

From surviving material remains it is almost certain that opium was not used as a recreational drug. Until now there is no reported existence of opium residue in human mummies (hair, bone tissue), and there are no material specimen, either plant residue or garlands, but there are some pot residues as stated above in which to detect opium traces.

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\(^{66}\) Counsell, 2006: 87-111.

\(^{67}\) Kimball, [http://users.rcn.com/jkimball.ma.ultranet/BiologyPages/R/Radioimmunoassay.html](http://users.rcn.com/jkimball.ma.ultranet/BiologyPages/R/Radioimmunoassay.html)


\(^{69}\) Notes taken at Counsell seminars at the University of Manchester, during my MsC, October 2007-July 2008.


\(^{71}\) *Idem*, 112-3.
According to the report done by Muzio in 1925, the oil contained in one\textsuperscript{72} of the seven vases found in at Kha’s tomb at Deir el-Medina, (an alabaster vase with an oily substance was found in a crystallized state), reacted chemically as if it was iron and opium\textsuperscript{73}, a dubious scientific reliability since it could not be reproduced in another lab, which is a bit inconclusive\textsuperscript{74}. Bisset et al also failed to detect opium with their scientific tests in 1994; it was simple pottery analysis\textsuperscript{75} and Counsell also discarded opiates in the tested samples.

Bisset tests were conducted to verify if these results were confirmed as coming from opium poppies. The techniques used were microscopy, thin layer chromatography, immunoassay, and gas-liquid chromatography combined with mass spectrometry. No presence of any alkaloid was detected after the tests\textsuperscript{76} which means that modern techniques may help to determine exactly if a drug is present or not in a resinous package or an oily substance.

\textsuperscript{72} Nunn, 1996: 155.
\textsuperscript{73} Gabra, 1956, 40; Hall, 1928: 205.
\textsuperscript{74} Wax and fatty substances were present, Koschel, 1996: 159-60, which may have been the ‘basis’ for the medicine transported on the jugs.
\textsuperscript{75} Bisset et al, 1994: 100.
\textsuperscript{76} Bisset et al, 1994:104.
Therefore, there is no assured material botanical support for the view that *Papaver somniferum* was known in Egypt before the 18th dynasty\(^77\), only textual, if we consider pEbers to be a copy from an earlier medical text. Until more material is found, containing detectable traces of plant residue available to be tested, and some characteristics of opium presence is confirmed in those, and the material is identified as non-medical, we cannot say that opium was used as a recreational drug in ancient Egypt.

To date its presence in Egyptian territories we can use the type of Cypriot jars found by Petrie at Gurob in the late 1800's\(^78\). The Gurob Project from Liverpool records the occupation of that settlement between the end of the Second Intermediate Period and the beginning of the 18th Dynasty\(^79\), with this identification it may be possible to confirm that the use of opium was known to the ancient Egyptians by then. Another note on the use of opium as a recreational drug is that jugs containing poppy latex would not be found in

\(^{77}\) Idem.  
\(^{78}\) Petrie, 1890: 47.  
\(^{79}\) Cypriot jar sherd identified and dated in the latest field report mentioning the Canaanite jars: http://www.gurob.org.uk/reports/Gurob-SCAPrelimRep-Nov2014-ReducedFileSize.pdf
a funerary context, as they were too expensive to be used for the afterlife. If used in life for a sick person the jugs found in a tomb would be empty. The shape of the majority of these jars’ opening, slightly bent, suggests that the ceramic vessel was used to inhale opium, like today’s pipes, or it could also be used to drink the crushed poppy seeds with water, wine or beer (such as the mekonion juice), as these were the main liquid vessels to introduce medicinal prescriptions into the body.

To summarize, this overview suggests that opium in a ready-mode formula was imported to Egypt for medical purposes. The imprecise time when Egypt started to cultivate opium may be a bit earlier than previously thought. As a final note, one needs to accept the red flower in bud on lady’s Taperet’s stela (Louvre E52, Third Intermediate Period) as an opium flower about to open. Opium was therefore not recreational, but maybe a drug producing a religious experience, a subject for another research article.

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80 Lady Taperet’ Stela is not a banquet scene, but a devotional offering scene, as noted by Park in a public lecture “Botanical Drug Use of Ancient Egyptians”, Oct 5th, 2012, Calgary, SSEA meeting.
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