LAUDANUM IN THE WORKS OF PARACELSUS

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For centuries laudanum was the common name for an alcoholic tincture of opium. The prescription of Sydenham became the most famous and was in use until recently. In addition to opium it contained saffron, powder of cinnamon and of cloves. Laudanum was used before Sydenham in a great variety of compositions and the general view is that credit must be given to Paracelsus for having introduced the opiate laudanum into therapy and for having given it its name.

The Oxford Dictionary says:

Laudanum used by Paracelsus as the name of a medicament for which he gives a pretended prescription, the ingredients comprising leaf-gold, pearls not perforated, etc. (Opera 1658 I. 492/2). It was early suspected that opium was the real agent of the cures which Paracelsus professed to have effected by this costly means; hence the name was applied to certain opiate preparations which were sold as identical with his famous remedy.

It is doubtful whether the word as used by Paracelsus was a fanciful application of laudanum a med. L. variant of Ladanum, or was suggested by laudare to praise or by some other word, or was formed quite arbitrarily.

Haeser in his chapter on Paracelsus makes the following remark:

Zu den heilkraftigsten Mitteln zählte Paracelsus die Opiate, besonders ein von ihm erfundenes "Laudanum."

Garrison repeats the statement quoting Haeser, and once an assumption is accepted by authoritative text-books it goes a long way.

1 Sydenham’s recipe was:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sherry wine</td>
<td>1 pound</td>
</tr>
<tr>
<td>Opium</td>
<td>2 ounces</td>
</tr>
<tr>
<td>Saffron</td>
<td>1 ounce</td>
</tr>
<tr>
<td>Powder of cinnamon</td>
<td>ā 1 ounce</td>
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</tbody>
</table>


2 Testimonies from English literature from 1602 on are given in the Oxford Dictionary.


"Ich hab ein Arcanum, heiss ich Laudanum, ist über das alles, wo es zum Tod reichen will." Grosse Wundartznei, I. Tr. 3.

I confess that I never felt quite convinced that Paracelsus had introduced this kind of laudanum—for two main reasons. Paracelsus uses opium very often. He describes it and gives a large number of prescriptions that contain it. Hence, it is hard to believe that he should have concealed in a secret remedy a drug that he openly used so very frequently. The other reason is that Paracelsus mentions laudanum very often as an ingredient of recipes where it cannot possibly have any connection with opium.

In an attempt to solve the question I have examined many passages in the works of Paracelsus where the word laudanum occurs. Such a study is difficult because the edition of Sudhoff cannot be used as long as it has no indices. I worked, therefore, mostly with the edition of Huser.\(^5\) It has good indices, but they are far from being exhaustive; although I went through the ten volumes page by page I cannot guarantee that I did not overlook some significant passage. What I found, however, seems to give a well-rounded picture.

I.

What did Paracelsus call laudanum in the many recipes where the word occurs? A clue is given by a passage (Huser VI, 250) of the book *De praeparationibus*. In Book II, De Nascentibus ex Terra, Treatise I, De praeparationibus Terebinthinarum et Gummorum Paracelsus gives the following list:

Nomina sunt ista: Ex Gummis, Opopanacum, Galbanum, Serapinum, Bdellium, Storax utraque, Laudanum, Mastix, Myrrha, Thus.

Ex Resinis: Balsamum, Terpentina, Resina.

In other words, laudanum was a gum like mastic, myrrh and the other gums mentioned in the list. The word laudanum is the mediaeval form of ladanum \(^6\) and Paracelsus, like other Renaissance

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\(^5\) Basel, 1589-1590, 10 vol. Unless indicated otherwise the references are all to this edition.

writers, very frequently used mediaeval terms, opopanaxum for opopanax, storax for styrax, etc. The word ladanum occurs in several Paracelsian recipes but the different spelling may be due to the editor. As a rule Paracelsus called the drug laudanum.

Ladanum or ledanum was the resinous secretion of the leaves and flowers of several varieties of Cistus. The drug is discussed very often in ancient pharmacological literature. Dioscorides has a long chapter on it.

There is also an other kinde of Cistus called of somme Ledum, a shrub, growing after ye same manner that Cistus doth, but it hath longer, & blacker leaues, contracting somme fatnesses in the Spring. The strength of whose leaues is binding, making for all thinges that Cistus doth. Now, that which we call Ladanum, is made of this plant. For the Hee Goats, & shee goates, feeding on the leaues heereof, doe manifestly beare away the fatnesse of them on their beards and on their thighes, because it is of a viscous nature, which taken off thence they straine, & hauing fashioned them into little balls, lay them vp in store. Somme also doe drawe little cordes across the shrubs, and taking off ye pinguous matter that cleaves to them, soe forme it. The best of it is that which is of a sweet smell, sommewhat green, easily made soft, fatt, vnpartaking of sand, or foulennesse, rosinie. And such is that growing in Cyprus, but the Arabick & Lybick is of lesse esteem. It hath an astringent warming, mollifying facultie, as also of opening the Ocula vasorum. It staies the falling haire, being mixed with wine, & Myrrhe, & oile of Myrtle. It also makes scars looke ye handsommer being anointed on with wine. And it cureth the paines of ye eares, being dropt in with Hydromel, or Rosaceum. It is suffumigated for casting out of ye Secundae, & it doth cure the hardnesses that are in the wombe, being mixed in a Pessum. And it is profitably put in to Anodyna, & to cough-medicines, & into Malagmata. It stops the belly also, being dranck with old wine, and it is also vetricall.

Galen also devotes a whole chapter to the description of the drug and its qualities. He calls it hot in the first degree but so completely that it is almost in the second degree. It is slightly astringent and

7 V, 218, 230, 237, 242. The index refers to laudanum.
8 G. Dragendorff, Die Heilpflanzen der verschiedenen Völker und Zeiten. Stuttgart, 1898, p. 446.
10 Ed. Kühn, XII, 28 f.
has very subtle particles. Therefore it is moderately softening, driving and digestive. Hence it is indicated for diseases of the uterus and holds back the falling hair.

The drug was used throughout the Middle Ages and the Renaissance. Matthioli in his commentary to Dioscorides first published in 1544 complained that it was difficult to obtain the drug pure because it was frequently adulterated. The best he could buy was in Venice where it was sold by perfume makers.²²

Let us now examine a number of Paracelsian passages where laudanum occurs. In De Gradibus et Compositionibus Receptorum ac Naturalium, Lib. II, Cap. VII (Huser VII, 13) laudanum is listed among the drugs quae ex terra proveniunt, in other words, that consist of the element earth, and it is described as being hot in the first degree.

Laudanum occurs in many recipes without specification, so in the following:

*Descriptio pillularum de Laudano.*³³

Rec. Laudani drach. semis
Rutae,
Absinthii, ana drach. i.
Theriacae optimae, quantum satis pro incorporatione. (Dosis grana quinque, nec ultra.)

*Contra hydropisim ex lacte.*¹⁴

Rec. Serapini,
Laudani,
Galbani, ana drach. i. semis
Lapidis lazuli,
Hermodactylorum ana drach. semis.
Conservae rosarum, q. s. pro incorporatione:
Dosis aureus semis.

In a number of recipes the laudanum used is to be *laudanum purum*:

³³III, 268. The pills were used for fever originating from the stomach.
³⁴III, 324, 327.
Cura Pleuresis quae in regione Cerebri.\textsuperscript{15}

Rec. Laudani puri, scrup. i.
Olei de musco, grana tria,
Camphorae, grana septem: Fiant pillulae cum aqua de spicula: Dosis a granis sex usque ad septem, vel novem secundum cohob.

\textit{Compositio Diaprunellae.}\textsuperscript{16}

Accipe aquarium prunellae lib. i.
Laudani puri drach. ss. Misce, fiat haustus secundum cohob, & gar-
garismus cum mundificatione linguae, & est ultimum medicamen in prunella.

\textit{Preservativa in rubea.}\textsuperscript{17}

Rec. Laudani puri scrup. i. ss.
Aquarum corallorum rubeorum,
Spodii, ana drach. ss. Liquoris myrrhae,
Thuris, ana drach. iii.
Macis quantum satis est. Fiat massa pillularum.
Dosis grana quatuor.

\textit{Descriptio ad Synoviam cerebri.}\textsuperscript{18}

Rec. Carabe ex asphalto,
Laudani puri,
Liquoris Lune, id est, argenti, an. kist unum.
Vini essensificati per alcool, ad pondus omnium.
Dosis secundam guttam per aures.
Wann es ihnen ex cerebro kompt, muss man per aurem einschütten.

Cura praedicta in omnibus speciebus pleuresis valet, nisi in pleuresi ex corde, ubi haec descriptio administratur: \textsuperscript{19}

Rec. Laudani puri scrup. i.
Musi gr. v.
Camphorae gr. vi. fiant pillulae cum aqua de spicula, Dosis gr. vi. vel vii.

\textit{Garagarismus.}\textsuperscript{20}

Rec. Compositum diaprunellae, Aquarium prunellae lb. i.
Laudani puri drach. ss.
Misce, fiat haustus secundum Cohob, cum mundificatione linguae: & est ultimum medicamen in prunella: alternatim illa aqua iam in potu, iam in gargarismo utere, prius frictione linguae praecedente.

From Matthiolius we know that it was difficult to obtain pure ladanum and that it was frequently mixed with sand. We should

\textsuperscript{15} III, 308. \textsuperscript{16} III, 400.
\textsuperscript{17} III, 309. \textsuperscript{18} V, 218.
\textsuperscript{19} A prescription for jaundice, III, 350. \textsuperscript{20} V, 237.
assume, therefore, that laudanum purum was ladanum from which impurities had been removed. As a matter of fact there is a passage in the Scholia in Libros de Tartaro (V, 246) that indicates this:

Laudani purid est liquoris separati puri ab impuro.

This purification was in all probability obtained through distillation. Leonhardt Thurneysser’s Onomasticum explains: 21

Laudanum purum. Das ist von Laudano dissolvirt und per descensum distillirt, als dann ist der Saftt am bodem.

The Onomasticum of Michael Toxites holds the same view: 22

Laudanum purum dicitur, non praeparatum cum aliis, sed quando dissolutum distillatur in liquorem, wan der gummi so man Laudanum nent, zerlassen, und undersich in ein liquorem distillirt wirdt: Gallice Ladan solu et distillé en liqueur.

This all conforms with the scholia to the Libri de Tartaro (V, 230 and 242):

Laudanum per descensum destillatum, oleum reddit.
Si laudanum destillatur per descensum, manet liquor in fundo.

Liquor laudani, the pure ladanum obtained through distillation is mentioned as such in a number of recipes, for instance:

Rec. De liquoribus laudani scrup. i. 28
Croci, gr. iii. (al. scrup. iii.)
Aloepatici, drach. iii.
Fiant pillulae communes, cum aqua absinthii.
Dosis grana septem.

Rec. Olei papaveris unc. ii. 24
Olei hyoscyami unc. ss.
Laudani liquefacti in oleo amygdalarum amararum drach. ii.
Misceantur, fiat potio oleata, cuius dosis ab uncia una usque ad uncinam unam & semis.

In another recipe extractum laudani is to be used, which is probably the same as liquor laudani (III, 351):

Praeservativum utriusque generis 25 (seu generale.)

Rec. Liquoris myrrhæae,
Thuris ana drach. iii.

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22 L. c., p. 452. 24 III, 258.
23 L. c., p. 452. 25 III, 28. See also V, 221, 223.
24 III, 258. 25 Sc. rubeae et nigrae icteritiae.
Laudani extracti,
Thassorum, ana scrup. ss.
Olei nucis muscatae quantum sufficit, pro bolo. Dosis a scrup. i. ad scrup. ii. ss.

Ladanum is also prescribed as *Laudanum praeparatum*, thus in a recipe for black jaundice (III, 350):

*Praeservativum in Nigra.*

Recipe Lapidis lazuli,
Succi fuderis montani, ana drach. i.
Laudani praeparati scrup. iii.
Olei de nuce muscata quantum sufficit pro incorporatione. Dosis a drach. ii. ad drach. iii.

The same term occurs in a prescription for the treatment of compressiones thoracis (III, 263, 266, V, 231):  

Rec. suci de suffo: id est, panis porcini unc. vi.
Laudani praeparati, unc. semis.
Olei nucis muscatae unc. semis.
Fiat mixtura.

Again the question arises what Paracelsus meant by *laudanum praeparatum*. The Onomasticum of Toxites says (p. 453):

Laudanum praeparatum, Wan man zu dem gummi andere species wie in apotecken der brauch ist, zusezt.

The Onomasticum of Thurneysser is more explicit:

**Laudanum praeparatum.** Ist wann zu reinem Laudano Ambra unnd Muscataen blumen gethan wirdt, nemlich zu einem Quintlein rein Laudano iii gran. Ambrae, unnd 6. gr. Muscataen Blumen, dann these dinge praeparieren in.

In Book II of *De Morbis ex Tartaro oriundis*, Chapter I, De Orexen, vulgo der Sodt, Paracelsus has the following Cura (III, 258):

*Cura.*

Resolve in aquam usneam, impinguesce locum, et sanabitur.

Descriprio Resolutionis est ista:

Rec. Laudani praeparati drach. i.
Sacchari candi drach. i. semis.
Ambrae grana trio,
Macis grana sex.
Fiant pillulae cum aqua menthae: dosis, numero tres.

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26 Compressiones thoracis voco quod alii vocant debilitatem digestionis, frigiditatem stomachi, nauseam, appetitum caninum, ardores stomachi, syncopein stomachi, vaporem foedum: quod haec omnia ex vitio Tartari venient, et per Tartari curam curantur: ideo uno nomine complector, voco compressionem thoracis.
The Author's Notes add to this prescription (III, 261):
Laudanum est capitale in hoc Recepto. Zuccarum et ambra non multum proficiunt.

The Scholia, however,—the authorship of which is uncertain—explain (V, 242):
Ambrae, macis. haec duo laudanum praeparant.

This conforms with Thurneysser's interpretation but is probably not what Paracelsus meant. Indeed, he would not have added ambra and macis 27 to the recipe if laudanum praeparatum already contained the drugs. Another prescription seems to give the correct explanation (III, 316):

*Mundificatio.*

Rec. Laudani puri, id est, praeparati unc. semis.
Liquoris corallorum scrup. ii. fiat mixtura in formula pillularum communium. Dosis a scrup. semis ad scrup. i.

According to this prescription laudanum purum and laudanum praeparatum were one and the same. Ladanum was prepared by being purified through distillation. Hence I am inclined to believe that Paracelsus used both terms indiscriminately, meaning the same, and that it was only later that his disciples and followers made a distinction and declared that laudanum praeparatum was a composite remedy containing ambra and macis.

I think there can be no doubt that in all passages mentioned so far the laudanum of Paracelsus was nothing else than the gum ladanum used since antiquity. But now the question arises whether Paracelsus used the term laudanum also to designate something else, a composite remedy, and if so, what was this remedy?

II.

In the *Grosse Wundarsnei* of 1536, Book I, Treatise 3, in the chapter dealing with the treatment of snake bites Paracelsus after discussing several remedies says:

ich hab ein archanum, heiss ich laudanum, ist uber das alles wo es zum tot reichen wil, das in seinem capitel verzeichnet wird. 28

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27 About macis see Matthiolus, *op. cit.*, p. 120.
In other words, Paracelsus says that he has a remedy that he calls Laudanum which is superior to the others in cases of threatening death and which he will describe in its chapter. The chapter is not to be found but then we know that the Grosse Wundarznei was to have five books of which only two were completed.

Paracelsus calls the remedy an arcanum which does not help in identifying it. He has written a great deal about this concept. Arcanum is the inherent virtue of a substance which nothing but experience reveals. It is totally different from the Galenic concept of elementary quality. In a recipe that contains the gum ladanum it is said (III, 266): In his rebus non considerantur gradus vel complexio, sed arcanum considerandum. Arcanum corresponds to a certain extent to our modern concept of the active principle of a drug. A drug has its arcanum and arcanum is also the designation of a drug or a compound remedy that has a marked effect on the body.

The Grosse Wundarznei was never finished but Paracelsus had given the prescription of his laudanum previously while he was lecturing in Basel in the winter of 1527-1528. He gave a course on special pathology and therapy which he intended to publish some day as Libri Paragraphorum. In one of the note-books preserved we find the following prescription (V, 258): a

Dissolutis iam deploratis utere isto laudano.

Rec. Orizei foliati (geschlagen Goldt) unc. semis.
Margaritarum non perforatarum drach. ii.
Asphalti, Florum antimonii ana drach. semis.
Croci orientalis drach. i. semis.
Myrrhae Romanae, Aloes epatici ana ad pondus omnium.
Reduc ad formam, Dosis a gran. 4. vel 7. ad 10.

It was a prescription for cases where death was threatening

a Or arcanum in the old spelling.

b See, for instance, Archidoxae, Lib. V (VI, 42 seq.). One of the best and simplest definitions is the one of Gerard Dorn in his Dictionarium Theophrasti Paracelsi, Francofurti, 1584, p. 18: Arcanum in genere, ut occultissimum quid significat, Paracelso pariter occultam in rebus naturalibus virtutem incorpoream, et cecvitae perpetuae ac immortalis e coelo in eam derivatae participem, quae multiplicari possit arte spagyrica supra priorem conditionem.

c Sudhoff, V, 285.

d Dissoluti were patients suffering from diarrhoeas, dysentery and similar diseases. The recipe is for dissoluti iam deplorati, that is for patients already given up.
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containing the heroic drugs gold, pearls and antimony—but no opium.

The treatise De vita longa has also a chapter De Dissolutis (VI, 165). The remedies are again gold and laudanum perlatum. The latter may well be the prescription just mentioned that contained pearls as one of its chief ingredients. The treatise has a special chapter on pearls (VI, 174-175) in which is said nihil magis esse Auro propinquum Perlis.

The treatise Von der Bergsucht has an interesting chapter in which Paracelsus expounds homeopathic principles (V, 17 ff.). Arcanum contains both, evil and good. What causes jaundice also cures it. He then continues:

So der particularis Medicus einem jeglichen sein sonder Diet und Recept suchen will, dasselbe suchen wirdt zu lang dem Kranken: dann nach arth diser Cur und Ordnung nimpt sich der ursprung Laudani, das ist materiae perlatae, das so viel ist, als wenn ein Perlin ausgezogen wirt, und dasselbe Perlin heilet nun dieselbe Krankheit, so auss seinem bösen entsprungen.

There can be no doubt that laudanum is described here as a pearl remedy. The same is in all probability the case in a passage at the end of the book (V, 71-72) where it is said that certain serious diseases can not be cured by the usual prescriptions but require the great arcana such as laudanum or pearl remedies or similar arcana.83

The same laudanum is probably meant in a concilium of 1538 (V, 123):

Reliqua sunt, Oleum Benedictum, Laudanum, Perlarum arcanum, Balsamum, iis utaris, ut dixi.

Laudanum was by no means the only Paracelsian pearl remedy. A great variety of them are described.84 Pearls were ground or calcined, mixed with vinegar, alcohol or other substances and used in many combinations.

And now a seemingly dark passage becomes clear. In De Gradibus et Compositionibus Receptorum ac Naturalium, mentioned before, Paracelsus lists laudanum as being ex terra, primum gradum caloris occupans (VII, 13). This laudanum, as we saw, was the gum. But then, a few pages later (VII, 31) he lists materia laudani as being

83 . . . sondern den grossen Arcanis zubefehlen, als dem Laudano, oder den Materien Perlaten und dergleichen.
84 So IV, 108. See the indices of Huser.
ex terra, frigia. This obviously cannot be the same laudanum, since the same drug could not be both, hot and cold. Paracelsus in addition correlates this materia laudani with the heart. What does that mean?

According to Paracelsus certain drugs like certain diseases are not only characterized by their element and quality. Herbs that are cold and from earth are not universally good for diseases of hot quality. There are seven kinds of diseases and also seven kinds of heat and cold. Here Paracelsus reveals himself as a follower of the astrologists. The seven kinds are determined by the planets and their corresponding organs: Sun—heart, Moon—brain, Venus—kidneys, Saturn—spleen, Mercury—liver, Jupiter—lungs, Mars—gall bladder. Materia laudani refers in all probability to the pearl remedy. It is from earth and cold like Materia perlarum and Materia Saphyrorum with which it is listed together and they all correspond to the heart like the hot Essentia Melissae and Essentia quinta auri. Opium, however, belongs into a totally different category. The genera papaveris are not listed among the great arcana but among the drugs that are ex terra, in primo gradu frigida (VII, 15).

I think the texts discussed so far are sufficient to make evident that Paracelsus designated two different things by the term laudanum:

1. The gum ladanum of the classical pharmacopoeia.

2. A compound remedy—an arcanum in his own terminology—that contained pearls as one of its chief ingredients.

I cannot find any connection, however, between laudanum and opium. I repeat that Paracelsus used opium very frequently. The prescriptions that contain opium, sucus, liquores or semen papaveris or oleum de papavere are innumerable. He never made a secret about his opiates. He was not the mystery man as whom he has been pictured so often. He had his own terminology because he was an independent thinker, but he explained it whenever he had a chance. If some of his concepts are sometimes dark it is largely due to the fact that many of his books were never written or remained mere fragments.
III.

One last problem must be discussed. If the laudanum of Paracelsus had nothing to do with opium, who was responsible for using the term in designating an opium preparation?

I think this must be attributed to the Paracelsists, the disciples, followers and commentators of Paracelsus. When he died in Salzburg in 1541 only a few of his books had been printed. He left manuscripts finished and unfinished, originals written in a hand that was hard to decipher, and copies. But there was also an oral tradition. Many people had known him, physicians, laymen, adventurers. They claimed to have seen him treat patients, to have received secret recipes from him. They were inclined to attribute their own prescriptions to him in order to give them more authority. Wild legends arose and Paracelsus became the miracle doctor.

The article on Laudanum of Michael Toxites is most characteristic. In his Onomasticum he mentions the gum laudanum as laudanum purum and laudanum praeparatum. But then he has a two-page article on the Laudanum Theophrasti which is neither laadanum nor opium but simply a miracle drug. It cures every disease with the exception of leprosy and even resuscitates the dead.

"It consists of two things and nothing greater than these can be found in the world." What these two things were is not said. It was a secret. The whole story is so typical of the formation of such legends that I am reprinting it. It reminds one of the Legenda Aurea, because it has all elements of style of the episodes that we are accustomed to find in the Vita of a saint:

Laudanum Theophrasti, non laadanum, neque opium est, ut quidam alioqui vir doctus, et mihi amicus nimis iracunde, et imprudenter admodum de Theophrasto scrispit. Effectus enim longe aliiud docuit, non enim summo hoc arcano homines occidit, sed iam iam mortuos in vitam revocavit: quod etiam Oporinus noster, piae memoriae mihi confessus est: ipsum hac medicina miracula praestitisse: se etiam Theophrasti nomine multis exhibuisse: quorum quidam vitae omnino, alii vero qui serius usi sunt, rationi aliquot diebus restituti fuerunt: praeertim in peste. Dixit etiam mihi se ipsum aliquando sumisse praecipitatum, cunque eum uxor ad iracundiam commovisset, unde nimir incaluerit: properasse se ad fontem, bibisseque liberalius aquam frigidam, inde venenum Mercurii ita fuisse excitatum, ut toto corpore intumuerit, medicique morti eum praesente uxor adiudicaverint. Quod cum ex astantibus,

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88 Strassburg, 1574, pp. 450-453.
visu iam amisko, audisset, mox parum de laudano, quod secum adhuc a Theophrasto ipsi datum, habebat, in os imposuisse, inde in dulcissimum somnum per semihoram, aut paulo amplius incidisse, ubi evigilaverit, tumorem, morbumque omnem, quae peculiaris huius Medicamenti natura est, admirante uxor, et ceteris qui praesentes erant, evanuisset. Haec non ab aliiis sed ab ipsomet Oporino, qui mihi fraterno amore iunctus fuit, in prato ad Rhenum cum eo deambulans, cum Basilea Argentoratum una navigaremus, audivi. Liberalli multa Andreas Iociscus in sua oratione recitavit: quaedam etiam falsa posuit: quin et Oporinum paenituit Epistolae, quam ad D. Wierum de Theophrasto scripsit, dixitque eodem tempore mihi, ab ipso fuisse emendacatam epistolam neque eam scripturumuisse si scivisset, ita in vultum prodituram. Quamquam praestat eum scripsisse, plura enim in ea sunt, quae ad laudem Theophrasti pertinent, quam ad vituperium, et quae ibi vituperat, longe alter etiam intelligenda sunt, quam vel Oporinus vel ali interpretati sunt, quae brevitatibus causa omittit. Est igitur Laudanum Theophrasti medicina laudissima qua non ex rebus puerilibus, non venenosis, non opiatis, sed omnium quas orbis habet praestantisimis quae vitam conservant, conficitur: et in omnibus morbis efficax est, praetergquam in Lepra. Ita appellata est a Theophrasto, quod omni laude dignissima esset. Duae enim saltam res sunt, ex quibus constat: maiora his inventi in mundo non possunt. Quare vera esse scio, quae de hac medicina scribo, falsa et mentita, quae olim adversus hoc Laudanum quidam ediderunt, qui ironice Laudanum sanctum appellaverunt. Vivit adhuc testis locuples, senex venerandus Georgius Vetus, qui adhuc hodie concionatorem agit Eberbach, in ditione comitum ab Erpach: illum accedite vos Theophrasto mastigae tribus enim tantum milliaribus ad Haidelberga distat. Is tum temporis cum Theophrasto Basileae vixit, quando nobilem Canonicum, et alias multos curavit, is medicamenta Theophrasti nomine administravit. Si quid mentior, nolo mihi patrocinetur. Haec de Laudano Theophrasti propter exterar nationes prolixius commemoravi, ut intelligent Theophrasto fieri inuriam, dum nostri tanto illum odio, doctrina eius minime cognita, persequuntur: quod aliquando clarius innotescet.

In the Paracelsus Dictionary of Gerard Dorn 86 laudanum is not yet described as an opiate:

Laudanum, et non laadanum, est medicina Paracelsi ex auro, corallis, unionibus, etc. composita. Est etiam materia perlata.

Laudanum, est specificum remedium sive medicamentum Paracelsi ad febres.

But then from 1600 on the view was frequently held that the Laudanum of Paracelsus had been an opium remedy. Oswald Croll in his Basilia Chymica first published in 1608 gives the following prescription: 87

86 Frankfurt, 1584.
87 In the edition Frankfurt, 1647 (with the notes of J. Hartmann), p. 189 ff.
Laudanum Paracelsi Laudatissimum.

Rec. Opii Thebaici uncias tres.
Succi Hyoscyami debito tempore collecti, et in Sole prius inspissati unciam i. et semis.
Specierum Diambrae et Diamoschi fideliter dispensatorum ana uncias duas cum dimidia.
Mumiae Transmarinae selectae unciam semis.
Salis Perlarum.
Corallorum ana drachm. iii.
Liquoris Succini albi per Alcohol vini extracti.
Ossis de Corde Cervi ana drachmam i.
Lapidis Bezoartici.
Unicornu animalis vel mineralis ana drachmam i.
Mosch.
Ambrae ana scrupulum i.

In defectu genuini auri potabilis nullis corrosivis inquinati addantur Oleorum Anisi
Carui
Arantiorum
Citriorum
Nucistae
Caryophyllorum
Cinnamomi
Succini ana guttae 12
Fiat ex his secundum artem Chymicam massa seu Extractum, e quo ad necessarios usus possint pilulae efformari.

Croll also gives the prescription of an

Electuarium Laudani.\textsuperscript{38}

Rec. Opii.
Succi e Rad. Hyoscyami Essentificatum ana unciam unam.
Essentiae radicis Mandragorae cum S. v. extractae drachmas sex.
Specierum Diambrae sine Moscho et Ambra praeparat. uncias quatuor.
Salis Perlarum.
Corallorum ana drachmas duas.
Carabe.
Mumiae ana scrupulos quatuor.
Croci Orientalis scrupulos duos.
Unicornu scrupulum unum.
Terrae Strigensis drachmam i.
Mellis despumati uncias duodecim.

\textsuperscript{38} L. c., p. 194.
Dissolvatur Essentia Opii et Hyoscymia (si sit nimis liquida, fac ut Spiritus vini prius sufficienter lento calore ab illis evaporet) in melle supra ignem, postquam probe mixta fuerint, adde Salia Perlarum et Corallorum, postea reliquos pulveres tenuissime tritos, Carabe scilicet, Mumiam, Crocum, Unicornu, Terram sigillatam, cum speciebus Diambrae paulatim insperge tepide diligenter miscendo in formam Electuarii.

Johannes Hartmann in his Praxis Chymiatrica first published in 1633 has a considerable number of Laudanum recipes:

L. opiatum (p. 46)\textsuperscript{a9}
L. [opiatum] aliud (p. 47)
De extractione Nepenthes sive 1. opiati vera et perfecta descriptio (p. 464)
De alia descriptione laudani, opiati, solis et lunae (p. 468)

None of these is attributed to Paracelsus. It might have been obvious at that time.

L. sine opio (p. 44)
L. antepilepticum (p. 77)
L. ad suffocationes matricis (p. 295)

Hartmann contributes to the Paracelsus legend by attributing to him

L. Mercurii Paracelsi (p. 490)
Theophrasti l. verum (p. 547)
Aliud l. Theophrasti (p. 548)

A careful investigation of the 17th century medical literature would without any doubt produce a great variety of laudanum recipes. I think, however, that for our present purposes these few hints will suffice. They show that laudanum became a generic term for praiseworthy remedies, some of which contained opium, some not. They also show that there was no unanimity of opinion as to what the real laudanum Paracelsi actually had been.

With Thomas Sydenham a new period begins. His laudanum became the laudanum of the pharmacopoeias where it was kept until very recently.

\textsuperscript{a9} The pages refer to the edition Geneva, 1635.