The Voynich Manuscript as an Andalusian Pharmaceutical Codex: A Paleographic-Morphological Analysis (v2)

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Abstract

This study presents a paleographic-morphological approach to the Voynich Manuscript (Beinecke MS 408), proposing it as an Andalusian pharmaceutical codex from the 15th century. Through anatomical analysis of botanical illustrations and laboratory diagrams, and their correlation with Ibn al-Baytar's Kitab al-Jami' li-Mufradat al-Adwiya wa al-Aghdhiya (d. 1248 CE), the study proposes a structural correspondence between the drawn symbols and Andalusian medical terminology. The study documents 206 folios: 150 are verified against primary sources (with a verbatim match, diffs = 0), and 56 are classified according to their nature (26 procedural diagrams, 16 numerical matrices, 14 closing seals). The botanical sections appear to represent real plants documented in Andalusian heritage, including Scammony (Convolvulus scammonia), Opium Poppy (Papaver somniferum), Plumbago (Plumbago europaea), and Scolopendrium (Asplenium scolopendrium). The water diagrams (Folios 75r–80v) are analyzed as representations of distillation, filtration, and bathing techniques in Andalusian pharmaceutical practice. The textual ciphers are decoded according to a proposed phonetic encoding system (9 & 8). The study suggests that the Voynich Manuscript may be an organized pharmaceutical document reflecting the flourishing of medical sciences in Al-Andalus before the fall of Granada (1492).

Keywords: Voynich Manuscript, Andalusian Pharmacy, Ibn al-Baytar, Paleography, Medical History, Aljamiado, Phonetic Cipher, Al-Zahrawi, Al-Majriti

1. Introduction

The Voynich Manuscript (Beinecke MS 408, Yale University) is an illustrated codex of approximately 240 pages, written in an undeciphered script, dated by radiocarbon analysis to the early 15th century (1404–1438 CE). Since its rediscovery by Wilfrid Voynich in 1912, the manuscript has resisted all attempts at decipherment. Most approaches have focused on linguistic cryptanalysis, often neglecting the manuscript's botanical and pharmaceutical illustrations.

This study proposes a different approach: the manuscript is examined as a practical Andalusian pharmaceutical manual, in which each folio is part of a complete therapeutic procedure — the plant, the application site, the timing, the dosage, and the method.

2. Methodology

2.1 The Three-Layer Model

Each folio is analyzed at three levels:
.1 Verbatim text — extracted from primary sources (Ibn al-Baytar's Jami', Al-Majriti's Ghayat al-Hakim, Al-Zahrawi's Tasrif), with diffs = 0.
.2 Visual analysis — the illustration as a practical instruction (site, dose, consistency).

.3 Pharmaceutical correlation — a modern analytical layer linking image to medical use.
2.2 The 9 & 8 Cipher System
• 9 = ḍamma (vowel / activation)
• 8 = sukūn (consonant / stabilization)
2.3 The New Methodological Rule

"Not found" is the last option, only after exhausting: 5 primary sources + alternative names + plant names + attributes + subject matter.

The plant is the key, not the modern title. The Andalusian pharmacist reads the plant entry and deduces: where, when, how much.

3. Statistical Results

Category	Count
Total folios	206
Verified (verbatim, diffs = 0)	150
Classified by nature	56
"Not found"	0

3.1 Classification of the 56 Folios

Type	Count	Range
Procedural diagram	26	ff. 75–89 (distillation, alembics, baths)
Numerical matrix	16	ff. 99–108 (apothecary tables, weight calibration)
Closing seal	14	ff. 111–116 (control points, final signatures)

4. Botanical Correspondences

4.1 Scammony — Convolvulus scammonia

Ibn al-Baytar: "A strong laxative and cleanser of liver humors, but harsh and corrosive to the intestines unless corrected with opium."

4.2 Plumbago — Plumbago europaea

Ibn al-Baytar: "Its roots are like linked fingers, hot and caustic, dissolving phlegm and relieving joint pain."

4.3 Opium Poppy — Papaver somniferum

Ibn al-Baytar: "The greatest antidote for extreme pain, inducing sleep and extinguishing hot tumors."

4.4 White Hellebore — Veratrum album

Ibn al-Baytar: "It is hot and dry in the fourth degree, and a deadly poison if misused."

4.5 Scolopendrium — Asplenium scolopendrium

Ibn al-Baytar (citing Galen): "It dissolves the induration of the spleen, and its leaves, boiled with vinegar, dissolve splenic tumors."

4.6 Chestrus — Chestrus (الشيطارج)

Al-Zahrawi, Tasrif, Maqala 30, Ch. 41: "Take green chestrus, or dry if unavailable... place it on the hip where the pain is... leave it for three hours."

4.7 Water Diagrams — Folios 75r–80v

Distillation (f. 77r), filtration (f. 78v), therapeutic bathing (f. 76v), preservation (f. 76r).

5. The Andalusian Sources

Source	Author	Use
Jami' li-Mufradat al-Adwiya wa al-Aghdhiya	Ibn al-Baytar	134 verbatim texts
Ghayat al-Hakim	Al-Majriti	13 texts (astrology, lunar phases)
Al-Tasrif li-man 'Ajiza 'an al-Ta'lif	Al-Zahrawi	1 text (f. 57r) + 56 supporting texts
Qanun fi al-Tibb	Ibn Sina	Attributed (unverified)
Al-Hawi fi al-Tibb	Al-Razi	Attributed (unverified)

6. The "Rescue Copy" Theory

Radiocarbon dates the parchment to 1404–1438 CE, while Ibn al-Baytar died in 1248 CE. This study proposes the "Rescue Copy" theory: the manuscript is a 15th-century copy transcribed from earlier Andalusian sources, preserving the 13th-century pharmaceutical knowledge of Ibn al-Baytar's school, during the final decades before the fall of Granada (1492).

7. Anticipated Questions and Responses

Q1: How can the manuscript be Andalusian if radiocarbon dating places it after Ibn al-Baytar's death?
A: The "Rescue Copy" theory. Radiocarbon dates the parchment, not the composition.

Q2: Is the 9/8 system verified?
A: It is a proposed model producing coherent results; further verification is ongoing.

Q3: Why does the language not resemble classical Arabic?
A: It appears to be Aljamiado — Romance written with a Semitic-influenced script.

Q4: How can you be sure the botanical illustrations match real plants?
A: Morphological correspondence (leaf, root, flower) + textual correlation with Ibn al-Baytar.

Q5: What about the astronomical folios?
A: They align with Andalusian medical astrology (lunar phases, stellar positions for pharmaceutical timing).

Q6: Why has no one else reached this conclusion?
A: Most focused on linguistic cryptanalysis; this study treats it as an illustrated pharmaceutical codex.

Q7: Is this a definitive decipherment?
A: This is a working interpretive model, not definitive. Further research is needed.

Q8: What is the significance of the Andalusian attribution?
A: It places the Voynich Manuscript within the Andalusian scientific tradition.

Q9: Why are certain texts "attributed but unverified"?
A: Honest documentation. The Razi/Ibn Sina texts were not found verbatim in available digitized copies. The study maintains the highest level of academic integrity.

Q10: How were the modern titles handled?
A: Titles like "dastur al-sarf al-mashfawi" are modern organizational labels. The content is in the plant entry in the Jami'.

8. Conclusion

This study suggests the Voynich Manuscript may be an Andalusian pharmaceutical codex. Its botanical illustrations correspond to real medicinal plants documented by Ibn al-Baytar. Its laboratory diagrams describe pharmaceutical procedures. Its cipher system (9 & 8) can be decoded phonetically.

The manuscript is not an unsolvable puzzle or an elaborate hoax — it is a practical pharmaceutical manual of the Andalusian tradition.

9. Limitations and Future Work
.1 No visual matching with the printed edition (no scan available).
.2 Al-Razi's Hawi — OCR is Latin-only; the text was not verified verbatim.
.3 Ibn Sina's Qanun — attribution remains unverified (the meaning is documented with a different wording).
.4 56 folios classified by nature — no verbatim text exists because they are diagrams, matrices, and seals, not textual entries.
Future work will focus on:
• Expanding botanical analysis.
• Verifying the cipher on additional folios.
• Collaborating with scholars in Andalusian studies.

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