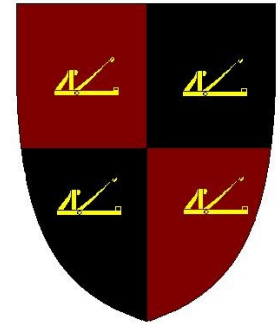
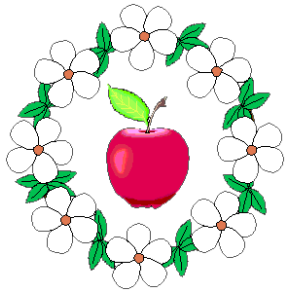


Arab & Asian Influences on Western Medicine



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University of Atlantia, February AS 57

Introduction / Overview

- This is a quick glance, intended to pique curiosity about how Western medicine learned from the East
- Handouts and course materials are at <http://www.3fgburner.net/#info>
- Class not recorded, but can save transcript/chat

State of Affairs, Fall of Rome to Early Medieval Period

- Western Europe: Fragmented by collapse of Rome
- Byzantine / Eastern Empire, hanging on
- Roman / Eastern Christian Church
 - Provides stability
 - However, attempts to suppress “Pagan” influences
- Middle East, Rise of Islam & Islamic Civilization

Rise of Islam

- Muhammad (570-632 CE) founded Islam, with the Islamic Calendar starting in 622
- Most of the Arabic Peninsula converted by 632
- Umayyad Caliphate (661-750 CE) ruled from India to Spain



Islamic Golden Age

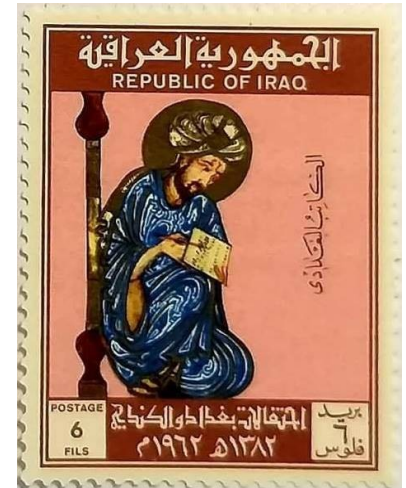
- Coincided approximately with the Abbasid Caliphate, late 700s to mid 1200s, CE
- Baghdad was the principal / largest city
 - Founded 762 CE, near the site of ancient Babylon
 - Caliph Harun Al-Rashid ruled there most of his reign
 - Established the House of Wisdom, center of learning
 - Instrumental in preserving Classical and Hellenistic Greek, and Imperial Roman knowledge

Some Big Names

- Al-Kindi (801-873), Abū Yūsuf Ya‘qūb ibn ‘Ishāq aṣ-Ṣabbāḥ al-Kindī, latinized to Alkindus
- Al-Razi (854-935?), Abū Bakr Muḥammad ibn Zakariyyā al-Rāzī, latinized to Rhazes
- Al-Zahrawi (936-1013), Abū al-Qāsim Khalaf ibn al-'Abbās al-Zahrāwī al-Ansari, latinized to Albucasis
- Ibn Sina (980-1037), full name Abu al-Hussayn ibn Abdullah ibn Sina, Latinized to Avicenna
- Ibn al-Nafis (1210-1288), Ala-Al-Din Abu al-Hassan Ali Ibn Abi-Hazm al-Qarshi al-Dimashqi

Al-Kindi / Alkindus

- Worked in the House of Wisdom, in Baghdad
- A major early translator of Greco-Roman material
- Wrote on math, sciences, medicine, pharmacology among other disciplines
- Promoted Hellenistic philosophies and attitudes, helping to focus on rational research
- With Persian help, was instrumental in importing Indian numerals and adapting them to Arabic numerals.
- Produced a mathematical system to help doctors evaluate treatments



Iraqi Postage Stamp, 1960s (Wikipedia)

Al-Razi / Rhazes

- Viewed by Arabs as the greatest Islamic physician
- Major works - Kitāb al-Manṣūrī, later translated in to Latin, and Kitāb al-ḥāwī, “The Comprehensive Book”
 - Al-ḥāwī covered Greek, Syrian, early Arabic
 - Imported Indian medical knowledge, and pharmacology
- Also wrote on differentiating Smallpox from Measles
- Before taking up medicine, he was already an Alchemist
- Setting up a hospital in Baghdad, hung meat around town, put hospital where it rotted the slowest



Later Image By
Gerard of Cremona
(Wikipedia)

Al-Zahrawi / Albucasis

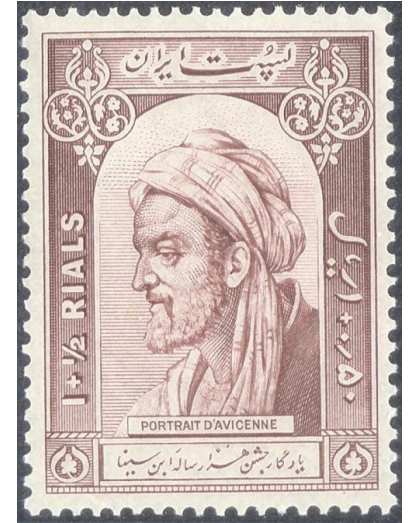
- Late 10th – early 11th C CE, practiced in Cordoba, Andalusia (al-Andalus)
- Produced the *Kitab al-Tasrif*, 30 volumes of medical knowledge
 - 1st book general principles, 2nd specific diagnoses / treatment, 30th surgery
 - Books 3-29 were pharmacology – different drugs for different treatments
 - Book 30 frequently published as a standalone
- Said to have invented over 200 surgical instruments including scalpels, retractors, cannulae, specula, etc
- Contributed to anatomical knowledge with human dissections



Pic from later, Latin translation of surgery book (Wikipedia)

Ibn Sina / Avicenna

- Born in present-day Uzbekistan, practiced in Hamadan, Persia
- Created the *Al-Quanun fi al-Tibb*, later translated into Latin as the *Canon of Medicine*
 - Summarizes Galen, Hippocrates, Dioscorides, and other docs he had access to
 - Topics: General Principles, Pharmacology, Specific Diseases, Bodily Conditions, and Compound Drugs
 - Canon, in translation, stuck around through the 18th C as a major med text
- Said to have been an absolute genius
 - Memorized the Q'uran by age 10
 - Decided to study medicine at 16, finished writing the Canon by 21
- Included his own analyses and observations, not just parroting the “ancients”
- Pioneered a systematic way of testing drugs / medications



Iranian Postage
Stamp of Ibn
Sina
(Wikipedia)

Ibn al-Nafis

- Toward the end of the Golden Age
- Syrian Physician, later moved to Egypt
- Got an early start in Medicine
 - Went to Med School age 16, in Damascus
 - Studied and practiced there for several years
 - Moved to Egypt at 23, became Chief Physician at Al-Naseri Hospital
- Main work: *Al-Shamil fi al-Tibb*, the *Comprehensive Book of Medicine*
 - Planned to be 300 volumes, only (!) 80 done by his death
 - Aimed to give a complete summary of Islamic medicine at the time
 - Dispersed and copied all over the world
- Discovered Pulmonary Circulation 400 years before Harvey
 - Got pushback for contradicting Ibn Sina and Galen
 - Did write a comprehensive commentary on Ibn Sina



Page from a
17th or 18th C
Indian copy of
the book
(Wikipedia)

Arab / Islamic Contributions

- Anatomy: Dissection was NOT forbidden under Islam
 - Discoveries in cardiovascular circulation
 - Relationship between muscles and nerves
 - Ophthalmology
- Pharmacology
 - Pharmacy practice was regulated and licensed
 - By 1000 or so, there was a specific protocol for testing new drugs
 - Islamic medical establishment, via Persia, was the major importer of Indian medical and pharmacological knowledge
- Facilities
 - Islamic hospitals WERE hospitals – had wards, pharmacies, examination areas, and teaching facilities
 - Wards included quarantine areas for infectious conditions
- Instrumentation – everything from scalpels and suturing, to specula and syringes, plus dozens of other items. See also, Albucasis

Conclusion

- This is just a cursory glance at Islamic contributions
- See sources (particularly the NIH National Library of Medicine)
- Islamic physicians and writers not only produced advances, but preserved ancient lore

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