To What Extent Was Montpellier, the Oldest Surviving Medical School in Europe, Inspired by Islamic Medicine?

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---------- Summary ----------

In spite of the fact that the medical school of Montpellier wasn't the first medical school founded in Europe, it's considered the oldest medical school persisted up to now in the western world. It's sometimes regarded as an offshoot of Salerno medical school, but after the heyday of Salerno was over it became, for a considerable time, the leading medical school in whole Europe.

What were the real reasons for the rise of its illustrious fame in medieval ages? The answer for this question is still a controversial issue. Although there are many evidences clarify the role of Islamic medicine in the emergence and the superiority of it, some western historians tried to diminish or deny the Islamic contributions.

In our treatise, we tried to follow the steps of the foundation and rising of the medical school of Montpellier in the medieval era. Furthermore, we attempted to highlight the participation of Islamic medicine in the development of various aspects of this faculty (curriculum, library, teachers and authors) until the decline of these Islamic effects in the mid 16th century.

Keywords: Medical School of Montpellier, Islamic Medicine in Europe, Medieval Universities.

The Birth of Medicine in Montpellier:

The city of Montpellier was established around 985AD as a village of merchants importing spices from the Levant (Syria). With the imports, came the medical uses of their products from the knowledge of Arabic medicine.[1] By the year 1000AD, graduates of Salerno medical school were teaching merchants and students in Montpellier although much of the learning was imparted by Arab and Jewish trading partners. Montpellier, like Salerno, was a health resort. Furthermore, it was easily accessible from Spain and Italy, so that the appearance of a medical school in such a centre is not surprising.[2] It is certain that, as early as 1137, there were excellent physicians at Montpellier. Louis Dulieu said that Montpellier was already a reputable medical centre at that time.[3]

The fame of Montpellier in medicine owed to the policies of the Guilhem lords of Montpellier, by which any licensed physician might lecture there, with no fixed limit to the number of teachers, lectures multiplied, and there was a great choice of teachers. In 1180, the lord of the city, Guilhem (William) VIII (1157-1202),[4] proclaimed that "anyone, no matter their religion or roots, could teach medicine in Montpellier".[5] There doesn't seem to be any reference in the records as to whether the teacher had to be qualified! Anyway, these policies demonstrated the prevailing tolerance in the community and reflected the domination of anarchy upon the practice of medicine at that time, because anybody could open a school to teach medicine and look after the patients.

At the end of the twelfth century, medicine was practiced by the monks of the convents, by some Islamic doctors living there and by few Jews.[6] Actually, the study of medicine in Montpellier was open to various talents, following the Antique, Arab and Judeo-Arabic schools.

The Foundation of the Medical School of Montpellier:

The Medical School of Montpellier is considered the oldest still-active medical school in Europe. In 17 August 1220, the professors of medicine formed a "Univeratas Medicorum"[7] and the cardinal Conrad von Urach, legate of Pope Honorius III (1148–1227), granted the school its necessary charter and brought the disorder of medical practice to its end. Later, the organization was completed in 1240 when the school was placed under the direction of the Bishop of Maguelonne, but the school enjoyed a great deal of autonomy.[8] In this way, nobody could practice medicine without having the authorization granted by a jury consisting of scientists and presided over by a religious personage.[9] However, The Medical School of Montpellier was organized on the lines of the Arabic medical schools.



Fig.1. Pope Nicholas IV. Source: http://en.wikivisual.com

George Sarton stated that "The earliest teaching at the Medical School of Montpellier was in Arabic and Hebrew; at any rate, Latin was the language used in the twelfth century".[10]

In 1289, the university was formally found, associated with a bull issued by Pope Nicholas IV (1227–1292),[11] combining all the long-existing schools (medicine, law and may be astrology as Charles Homer

Haskins stated[12]) into a university. Later, other faculties (Art, Theology, Science and Letters..) were established in the university. [13]

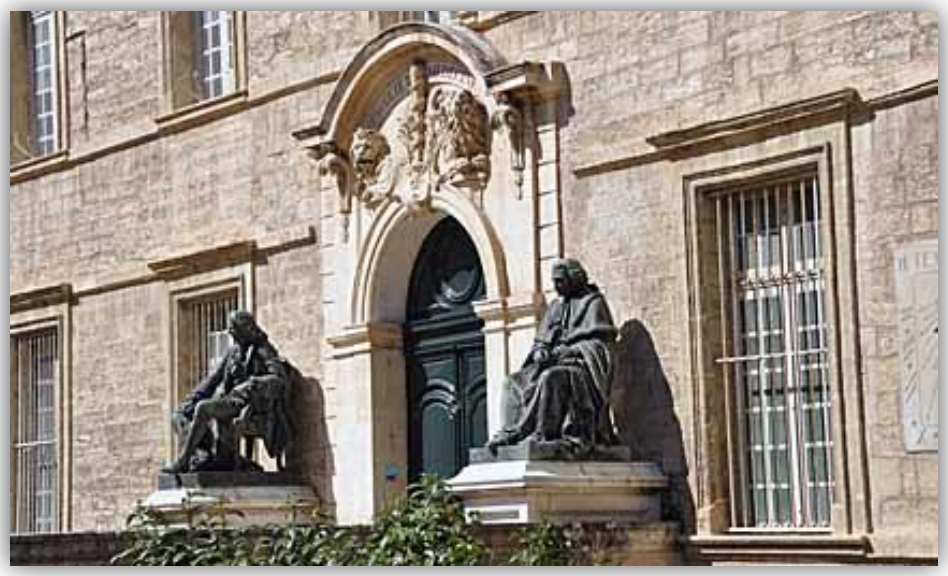


Fig.2. The medical faculty of Montpellier. Located at Street "rue école de pharmacie". Source: http://www.ericandersonsworld.com

How the Islamic Medicine Reached Montpellier?

Actually, Many factors gathered to facilitate the access of Islamic medicine to Montpellier. The first factor was the closeness of the south of France to Muslim Spain.

The second factor was the European Christians' awareness and probably envy for what was beyond the mountain chain of Pyrenees that separated France from Spain. This attitude obviously appears in the following testimony of Michael Scot (1175–1232?):[14] "Semi barbarous Europe looked with wonder upon a land so blessed by nature and adorned by art; where the remains of classic antiquity were taught in the same schools with the botany of Syria and the chemistry of Spain; where a philosophic spirit of inquiry had awakened the noblest aspiration of the human intellect, and where knightly courtesy had replaced the rudeness of sword".[15]

The commercial aspects also played an important role, with regard to the fact that Muslims had extensive trading links in Montpellier even coming from as far as the Muslim east. Louis Dulieu stated that such commercial links were accompanied by the influences of Muslim library and scientific achievements. Thus, Islamic medicine found not just an echo, but excited interest too.[16]

The fourth factor was the fanaticism of the Spanish rulers of the Christian Spain and Al-Mohades in the south, besides the war burdens, which pushed many of the Muslims and Jews physicians and scientists to resort to Montpellier in the 12th century where they found peace, tolerance and opportunities. This explains why a considerable Muslim and Jewish population (schooled in Muslim education and

learned in Arabic) was living in it, and the Christian population was also able to speak Arabic at the time.[17]

The teachers at the medical school of Salerno developed a good curriculum, founded on their translations of the great texts of Greek (from Arabic) and on Arabic Islamic medicine. Constantine the African (1020–1087) was instrumental in transmitting Islamic medicine to the Latin world with its new concepts. Sooner, the curriculum of Salerno medical school transmitted to Montpellier. Lucian Luclerc quoted from the book "Histoire Litteraire de la France" that "During the 2nd half of the 13th century, many Italian physicians (for example Roger de Parme) left their homeland, due to many disturbances, towards France carrying with them the works of Albucasis.[18] As Rashdall states, Montpellier medical faculty "may have been an offshoot of Salerno".[19]

At last, the journeys of the western scientist and students to the Islamic world including Syria, Egypt, Northern Africa and Andalusia, especially after the Spanish conquest of Toledo. Some famous examples included: Michael Scot, Adelard of Bath, Pope Sylvester II, Gerard de Cremona, Arnold of Villanova and many others. These European scholars learned Arabic and translated many of the Arabic books to Latin. It's must be taken into consideration that the library of Toledo was full of Arabic medical manuscripts which became available for European people to translate and study after Alfonso VI capture Toledo in 1085. The translation process carried out either from Arabic to Latin directly or at most from Arabic to Hebrew or Spanish, then to Latin. Jews and Christians participated in the latter method.

Islamic Medicine imprinted the Medical School of Montpellier:

The Islamic medical effects were demonstrated in various aspects of the school including the curriculum, the library, the teachers, the students, the publications and the translations.

The Curriculum:

During all the thirteenth and the fourteenth centuries, Islamic medicine was the most important subject in the teaching program of the medical school of Montpellier. The teachers commented on Avicenna (Ibn Sina), they explained Rhazes (Razi), Mesue (Ibn Massawih) etc.. Galen was quoted from time to time and Hippocrates was rarely quoted. As regards the other Greek doctors, they were purely and simply unknown.[20]

At that time, there were 16 teaching books in Montpellier library, 13 of which were books of Islamic medicine. These books were:

The Canon of Avicenna. The Antidotarium, the Continent, Al-Mansouri and the Aphorisms of Rhazes. The treatise about Pestilence of Avenzoar. The book of fevers by Isaac Ibn Suleiman. The Isagoge of Hunayn Ibn Isaac. The translations of Constantine (Ali Ibn Al-Abbas, Isaac Ibn Suleiman and Ibn Al-Jazzar). The guide of

doctors and the spring water. In addition to the Techne, De Morbo et Accidenti of Galen, and the Aphorisms of Hippocrates.[21]

"The book of the lessons and keys" in the Records of the University, gives us a precise idea about the programs of the school of Montpellier from 1489 to 1500.[22]

Year	Hippocrates's Books	Galen's Books	Avicenna's Books
1489	1	2	**4**
1490	0	0	**3**
1491	0	2	**4**
1492	1	0	**4**
1493	2	3	**6**
1494	1	2	**5**
1495	1	4	**5**
1496	1	2	**4**
1497	0	2	**6**
1498	1	2	**5**
1499	1	1	**4**
1500	1	4	**3**

From the former table, it's obviously that:

1. The works of Avicenna had the lion's share from 1489 to 1500, and that they were the exclusive references in 1490. It's only since 1500 the works of Galen exceeded, for teaching, the ones of Avicenna.
2. Hippocrates did not have the importance given to him by the Westerners.

Actually, Avicenna's medical book "Canon of Medicine" appeared in the oldest known syllabus of teaching given to the School of Medicine at Montpellier, a bull of Clement V, dating from 1309, and in all subsequent ones until 1557.[23]

At any rate, Islamic medicine was still desired till the beginning of 17th century. During the meeting hold at the university in 10 April 1607, some students asked their teacher Jacqes Paradille to explain the treatise of Avicenna.[24] In the next meeting hold in 3 October 1607, they demanded him to explain liver diseases by using Rhazes 's book. In Addition, they ask another teacher Francois Ranchin to teach them child and stomach diseases by using Avicenna's and Razi's books respectively.

The Canon was highly prized in the later Middle Ages, was used as a textbook in many medical schools, even in that of Montpellier as late as 1650, was eventually printed in numerous editions, and was the subject of many commentaries.[25]

The Library:

There is nothing better to help form a precise idea on the Islamic medical impact on Montpellier than by looking at its faculty of medicine and making a summary of the Latin translation of some original Islamic manuscripts it contains:[26]

- Abulcasis (Al-Zahrawi): (The Book of Al-Tasrif) Number. H.89- XIII_XIV centuries.
- Ametus (Ibn Al-Jazzar): H. 277-XIV-XV c. (f. 65. Epistola Ameti filii Habre.. de proprietalibus ad qemdam consanguinem suum).
- Avenzoar (Ibn Zuhr): Number. The book of Al-Taysir, Treatise of Epidemic). Number. H. 25-XIIIc. (fol 1-47).
- Avicenna (980-1036): The Book of Canon. Number. H.15 XIIIc.
- The Translation of Constantin the African for the following Islamic physicians:
  1- Ibn Al-Jazzar: Viaticum (Zad Al-Mousafer), Number. H. 324: XIII c. I (fol 1-54). Of Stomach: H. 421 XIII c. I
  2- Isaac Ibn Suleiman: On Diets (Universal and Particular), Number. II (fol 55-6). On Urines and On Fevers, Number. H. 182. XIV c. I.[27]
  3- Isaac Ibn Omran: Of Melancholia. Number. H. 421 XIII c.
  4- Ali Ibn Al-Abbas: Pantechni (Al-Malaki, Kamel Al-Sinaa Al-Tibbia), Number. H. 187. XIII c.
- Geberus (Jabir): Incipunt flores naturarum quod est primus liber Geberi. Number. H. 277 (fol 61-3).
- Mesue (Ibn Massawih al-Maradini): Allforismi Johannis Damasceni filii Serapionis (cum commentario), Number. H.182. XIV c.
- Rhazes (Al-Razi): The books of Al-Hawi, Al-Mansouri and The Aphorisms (Al-Fosoul).
- Hunayn Ibn Isaac: The Isagoge (Al-Masael) which is a translation of Galen.
- The list also included works by Ibn sarabi, Ibn Ridwan, etc.., and also manuscripts in Romance languages, including the book of Al-Tasrif by Abulcasis.

It's noteworthy that the library of Montpellier contained all of these Islamic books Although there were a scant amount of books in European universities, for example Paris university contained only 9 books, one of them "Al-Hawi" of Rhazes.

The Teachers:

Among the most famous teachers at the medical school of Montpellier, there were Arnaldus de Villa Nova (also spelled Arnaldus de Villanueva), Ermengaud Blein, Pierre de Capestang, Jean Jacme and other ones, who were called the Arabic Scholars, as they only taught the Arab medicine. For example, Arnaldus de Villa Nova (1235–1311)[28] was born in Valencia, but he spent most of his life at Montpellier.[29] He taught, for many years, in Montpellier school of medicine. he was highly esteemed at court, and among his patients were included two kings and three popes. His unorthodox views brought him into conflict with the Church, consequently, some of his works were publicly Burned.[30]



Fig.3. Arnaldus de Villa Nova.
Source: www.crystalinks.com

He wrote many medical books like "Breviarium Practicae" and "Liber de Vinis". He is credited with translating a number of medical texts from Arabic, including Avicenna's "Maqala fi Ahkam al-adwiya al-qalbiya" as De "viribus cordis", the "De medicinis simplicibus" by Abu al-Salt (Albuzali), and Costa Ibn Luca's "De physicis ligaturis". George Sarton stated that he also wrote "Libellus Regiminis de Confortatione Visus", which he entirely copied the technical part of his book from Ibn Masawaih al-Maridini.[31] Plus, he wrote a commentary on the Regimen of Salerno.[32]

Many teachers at Montpellier previously learned Islamic medicine at Salerno. For example, Roger of Salerno, the greatest Salernitan surgeon, has been flourished in Salerno about 1170, then became Chancellor of the medical school at Montpellier and wrote the "Practica Chirurgia" in 1180.[33] It became the surgical textbook of Salerno medical school, and it was chiefly based on the writings of Constantine the African,[34] in other words, on Islamic medicine.

Other examples include: Bernard of Provence, also known as Bernardus Provincialis, was a Salernitan physician who flourished in Provence in late 12th century.[35] He taught medicine at Montpellier. Giles of Corbeil (d. 1220-1224), a French physician, studied at Salerno, then he stayed for a while in Montpellier.[36] His most famous work was "Medical Poems" which were very popular in the Christian world until the 16th century.[37]

Even after 1500, the Islamic medicine was still taught in Montpellier and it had still its defenders. We find a typical example in the book of Jack Austruc "Memories Serving the History of Montpellier University", "Rene Moreau, a teacher of the University, reproached Jacobus Sylvius, another teacher of Montpellier for being a follower of the Arabs and of the Barbarians and for not attending to Hippocrates or to Galen.[38] In the same way, he reproached the university of Montpellier for its taste for the Arab medicine. This story proves that, even in the middle of the sixteenth century, the Arab medicine exercised an important influence in Montpellier". Moreover, Austruc says: "Surely, Montpellier had taught the Arab medicine for a long time. It was not in a position to teach other medicines. This fondness for the Arab medicine was common to all the universities".[39]

The Students and Authors:

Guy de Chauliac (1300-1368) was one of the most famous French physicians and surgeons. He studied medicine at Montpellier, then Around 1325, he became a Master of Medicine and Surgery. Chauliac's reputation as a physician grew quickly. He was invited to the Papal Court in Avignon, France, to serve as a personal physician to Pope Clement VI (1342–1352). He also served as physician to Pope Innocent VI (1352–1362), and then to Pope Urbain V (1362–1370). In 1363 he completed a large and influential treatise on surgery, titled in Latin "Chirurgia Magna" which means the Major Surgery. The work was extremely popular and widely read by physicians in late medieval Europe until the sixteenth century. The original manuscript was in Latin, but it was sooner translated



Fig.4. Illustration from de Chauliac's book "Chirurgia Magna" shows Anatomy Lesson at Montpellier Medical School. Source: www.bbc.co.uk

into many other languages (including English, French, Hebrew, Dutch, Italian, and Provencal). The Hebrew translation of the 30th essay still exist at Montpellier library with beautiful figures of the surgical instruments.[40] He claimed that surgery found its start with Hippocrates and Galen, and further developed in the Arab world through people such as Haly (Ali Ibn Al-Abbas), Albucasis, and Rhazes. His book was greatly influenced by Islamic scientists; he frequently quoted Albucasis and Avicenna in his book.[41] He cited Albucasis for more than 200 times.[42] Chirurgia Magna was reworked multiple times, included removing references to Islamic scientists, to the point that the work was no longer recognizable as Chauliac's own. In figures 5 and 6, it's obvious that there is much resemblance between the medical instruments used by Albucasis and Guy de Chauliac.

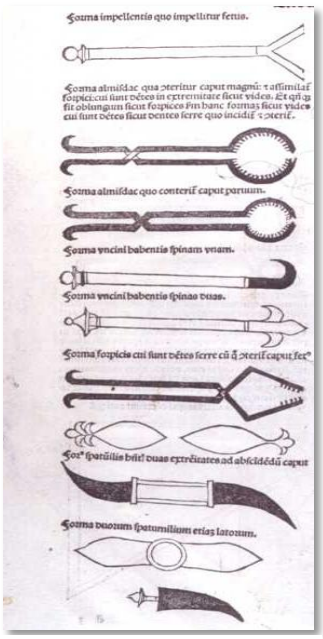


Fig.5. The Medical Instruments in "Chirurgia Magna". Source: www.awesomestories.com



Fig.6 The Medical Instruments in Albucasis's treatise on surgical. Translated to Latin in 1531. Source: www.wikipedia.com

Montpellier attracted students from many countries in the period of Islamic medicine, including a number of enterprising Englishmen. There was Gilbertus Anglicus (d. 1250), who wrote a compendium of medicine which contained nothing new. A more distinguished English student at Montpellier was John of Gaddesden (1280-1361), who became professor at Merton College, Oxford, and whose book bears the curious title "Rosa Anglica".[43]

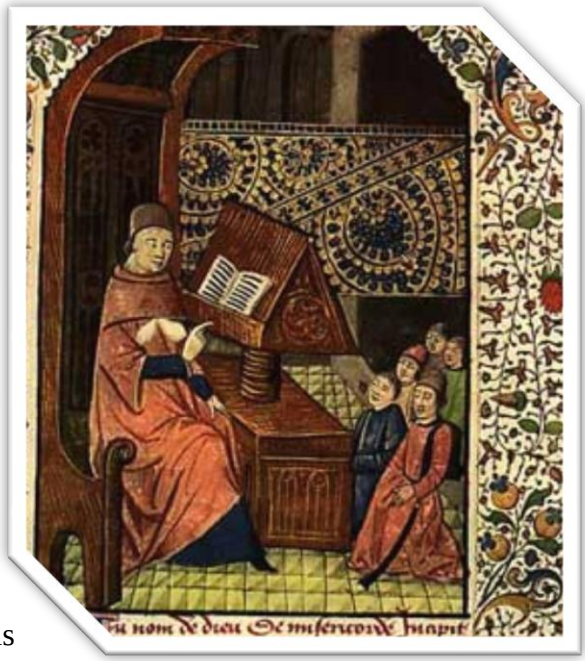


Fig.7. Illustration from de Chauliac's book "Chirurgia Magna" shows Class Room at Montpellier Medical School. Source: www.en.easyart.com

Petrus Hispanus (c. 1277) was born at Lisbon, and after a brilliant career as a student of theology and medicine, was appointed physician to Pope Gregory X. A little later, owing to a series of unexpected events, he was elected to the papal chair as John XXI. His best known work, Thesaurus pauperum "Treasury of the Poor" was very popular.[44]

Bernard De Gordon (c. 1285), another student or teacher of Montpellier, contributed to the garden of medicine by writing the Lilium Medicinae, which still exists in rare manuscript form.[45]

John of Arderne (1307-1390), who wrote an illustrated treatise on fistula, Educated at Montpellier and remained for some time in France as an army surgeon.[46]

By far, the greatest clinical physician of the seventeenth century was Thomas Sydenham (1624-1689), Graduating at Oxford, Sydenham continued his medical studies at Montpellier, and on his return he practiced in London.[47]

The "La Gazette de France", the first periodical of any kind in Europe, was first published in May 1631 by Theophraste Renaudot (1586-l653) who studied medicine at Montpellier.[48]

The Translators:

In 13th century Montpellier, Profatius and Bernardus Honofredi translated the "The book of Diets (Kitab alaghdiya)" by Ibn Zuhr (Avenzoar) as "De Regimine sanitatis"; and Armengaudus Blasius translated the "Poem of Medicine (Al-Urjuza fi al-Tibb)", a work combining the medical writings of Avicenna and Averroes, as "Cantica cum commento".[49]

The Jews, Ibn Tibbon family (Samuel, Moses and Judah), Jacob Ben Mahir and John of Brescia, Ibn Ezra etc.., in particular, played a major part in the Latin translation for the Arabic medical books.

Judah ben Saul Ibn Tibbon (1120 –1190?), the father of Jewish translators as Sarton stated,[50] was a translator and physician. He was born in Granada, but he left Spain in 1150, probably on account persecution by the Al-Mohades, and went to southern France. [51] He translated a number of philosophical and grammatical treatises.[52] His son Samuel Ibn Tibbon (1150-1230) translated the following writings of Arabic authors: Ali Ibn Ridwan's commentary on the "Tegni" of Galen, Three smaller treatises of Averroes, under the title "Sheloshah Ma'amarim" and Yahya Ibn Batrik's Arabic translation of "Aristotle's Meteora".[53] Samuel's son Moses Ibn Tibbon was also a physician, author and translator. His most important translations are as follows: Averroes: Commentaries on "Aristotle's Physica Auscultatio", Bi'ur Arguza (commentary on Avicenna's "Arjuzah"). Avicenna: "The Small Canon". Alfarabi: Book of the Principles. Ibn Al-Jazzar: Viaticum. Hunain Ibn Isaac: Introduction to Medical Science. Razi: Book of the Classifications of Diseaes, Antidotarium. Many translations from Maimonides included: Commentary on Hippocrates' Aphorisms, a treatise on poisons, a treatise on logic, a treatise on hygiene in the form of a letter to the sultan and others. He was the father of the Judah Ibn Tibbon who was prominent in the Maimonidean controversy which took place at Montpellier.[54]

Conclusion:

It's obviously shown that the Arabic Islamic medicine accompanied the school of Montpellier from its creation to the second half of the sixteenth century. It made it possible for the school of Montpellier to develop, to open out and to become a scientific center, not only in France but also in Europe, towards which students and patients made their way. Montgomery Watt (1909 –2006), the Scottish historian,[55] admitted this truth as he wrote "the contribution of Montpellier to the development of European medicine on Arab lines is probably more important than is generally accepted".[56]

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