

**IBN AL-JAZZAR ON FEVERS
A CRITICAL EDITION OF ZAD AL-MUSAFIR WA-QUT
AL-HADIR BY GERRIT BOS**

Lina Kushidayati

STAIN Kudus, Central Java, Indonesia.

linakushidayati@gmail.com

Abstract

This writing discusses critical edition on book 6 of the Zad by Gerrit Bos. The book is entitled Ibn al-Jazzar on Sexual Diseases and their Treatment. Gerrit Bos writes that Ibn al-Jazzar on fever is a critical edition of Zad al-musafir wa-qut al-hadir. This study focuses on how Gerrit Bos' work is. The method of this research is library research by analyzing some literatures such as books and journal articles. The results of this study shows that the critical edition of book 7 chapter 1-2 by Gerrit Bos presents comprehensive information about one of al-Jazzar work. There are many inconveniences in reading the text such as consulting the English translation to the Arabic text but this critical edition is a great contribution in the academic world and magnificent since this is the first critical edition dealing with fever that has been published.

Keyword: *Critical Edition, Al-Jazzar Work, Gerrit Boss.*

A. Introduction

In this paper I portray the work of Gerrit Bos on Ibn al-Jazzar's *Zad al-musafir wa-qut al-hadir* (Provision for the Traveler and the Nourishment of the Sedentary). Under a title *Ibn al-Jazzar on fever*, Gerrit Bos discusses book 7 chapter 1-6 of the *Zad*. In another work, Bos presents his critical edition on book 6 of the *Zad*, the title of this book is *Ibn al-Jazzar on Sexual Diseases and their Treatment*. In his work Gerrit Bos writes that *Ibn al-Jazzar on fever* is a critical edition of *Zad al-musafir wa-qut al-hadir*. However, is this a good critical edition?

Through this paper I would like to answer the question above. This paper is divided into three main parts. The first part of this paper is the introduction of Gerrit Bos' work *Ibn al-Jazzar on Fever*. This part discusses the life and works of Ibn al-Jazzar and the manuscripts which are used by Gerrit Bos. The second part is my analysis on Gerrit Bos' work and the last is conclusion.

B. Biography of al-Jazzar

Gerrit Bos briefly writes about the biography of Ibn al-Jazzar in his critical edition. However, as he mentioned in the introduction, the reader can look at the biography of Ibn al-Jazzar in his another work under the title *Ibn al-Jazzar on Sexual Diseases and their Treatment*.

Abu Ja'far Ahmad b. Abi Khalid ibn al-Jazzar, born in Qayrawan, the medieval capital of Tunisia, hailed from a family of Physicians. His father was a doctor, as was his paternal uncle Abu Bakr. He studied with the famous Jewish philosopher and Physician Ishaq b. Sulayman al-Isra'ili I (ca. 243/855-343/955), who had been a student of Ishaq ibn "Imran (d. 296/908), and who at the age of fifty emigrated from Egypt to Qayrawan, where he was appointed court physician by the Fatimid caliph 'Ubaydallah al Mahdi. Ibn al-Jazzar started a practice of his own in his native city, where he died in the year 979/980.

He led an austere life, devoting himself to the study and practice of medicine. Every summer he used to travel to al Munastir

on the Mediterranean coast where he would stay in a famous Sufi-cell. He did not look for a position, like many of his medical colleagues did, at one of the princely courts. As part of his medical practice he received and examined his patients during the hours of consultation, and analyzed their urine. His servant Rashiq would then administer to them the required medicines, free of charge. When he died, well over eighty years old, he left 24,000 *dinars* and twenty-five qintars weight of books on medicine and other subjects (Bos, 1997: 5-6).

Bos' writing on al-Jazzar's biography is much more complete than that of Fuat Sezgin in the GAS (*Geschichte des Arabischen Schrifttums*) but it seems that Gerrit Bos quoted from Sezgin's work. Even though both of them do not mention the date of al-Jazzar's birth, Sezgin and Bos mention that al-Jazzar died at the age of 80s (Sezgin, 2000: 304). According to Adil Muhammad 'Ali al-Syaikh Husain, al-Jazzar was born in the year 282 H/ 898 AD and died in the year 329 H/980 AD (Husain, 1989: 6).

C. The works of al-Jazzar

Skilled in a variety of sciences including history and geography, Ibn al-Jazzar was a prolific author, especially in the field of medicine. His writings earned him great fame and made him very influential in medieval Western Europe.

His *Kitab al-adwiya al mufrada* (*Treatise on Simple Drugs*) was translated into Greek, Latin and Hebrew, and was frequently copied. Through its Latin translation by Constantine the African, under the title *Liber de gradibus*, it became one of the most popular pharmacopeia in the Latin West. His *Tibb al-fuqara' wa al-masakin* (*Medicine for the Poor*) represents a literary genre which was especially popular during the Middle ages, when it was practised by different authors, as, for instance, al Razzi and Peter of Spain.

In his introduction about al-Jazzar, Gerrit Bos mentions three *Kitab* (books) which were written by al-Jazzar, they are *Kitab al-adwiya al-mufrada* (*Treatise on Simple Drugs*), *Tibb al-fuqara' wa al-masakin* (*Medicine for the Poor*) and *Zad al-musafir wa-qut*

al-hadir (Provisions for the Traveler and Nourishment for the Sedentary). However, in his another work, *Ibn al- -Jazzar on Sexual Diseases and their Treatment*, Bos (1997: 7) suggests readers to look at Sezgin's for a complete survey on al-Jazzar's writings.

This book, *al-Jazzar on fever*, actually is Book 7, chapter 1-6 of *Zad al-musafir wa-qut al-hadir*. Book 6 of the same *Kitab* is edited by Gerrit Bos under the title *Ibn al-Jazzar on Women's Diseases and their Treatment*. The *Zad* itself consists of seven books that provide concise descriptions and discussions of different diseases and their treatment. The most important thing is that this work is the first critical edition and translation of a medical work of the Arab physicians dealing with fever that has been published (Bos, 1997).

The *Zad* itself is a medical handbook which presents a medical treatment from head to toe. Ibn al-Jazzar had a specific reason why he wrote this book. He mentioned his reason in his work *Tibb al-Fuqara'* as quoted by Bos (1997: 8) in his *Ibn al-Jazzar on Women and Sexual Diseases and their Treatment*,

"I have seen how many great and excellent physicians have composed books on the treatment of the disease which may affect each of the limbs (of the body), with the intention of composing a work fitted for regular consultation. Some of these works, however, are longer and more detailed than necessary, while others are shorter than necessary. Knowing this, I have composed a work in the treatment of the diseases which may affect each of the limbs of the body and I have called it "Zad al-musafir wa qut al-hadir". I left out everything that might spoil it by making it too burdensome, too long, too complicated and too profound. Word of it spread in the countries and it was well received by the physicians."

According to this proceeding Ibn al-Jazzar devotes most of his attention to therapy, less is said about actiology and symptology, while physiology is almost completely neglected. But in spite of the good reputation which the *Zad* acquired for itself, Ibn al-Jazzar was not blind to its limitations and deficiencies, and recognised at a certain moment the necessity of the composition of a new work.

This is clear from the continuance of the introduction to the *Tibb al-fuqara'* where he remarks:

But I saw how many poor and destitute people were unable to profit from this work (*Zad al-musafir*) and from other works composed by the physicians in the preservation of the health of the healthy and the healing of the afflictions of the sick, because they were poor and unable to find those means by which they could be treated and healed from their diseases, namely, food, potions and drugs. Nor could they get a physician who knows the required quantity and quality of these ingredients. I therefore decided, for the medical training of him who may be versed in this work of mine, I mean the *zad al-musafir*, and who has a comprehensive knowledge from it about the diseases, their causes, symptoms, and different ways of treatment, to compile (a book) on the drugs which can be found with the slightest effort and trouble. For in this way it will be easy for the physicians to treat the poor and destitute of the common people with these drugs which I have collected from the works of Galen, Dioscurides, Paul and other excellent physicians."

But despite these limitations, the *Zad al-musafir* is without any doubt his most important work. It contains many valuable quotations from the works of famous physicians and philosophers, such as Hippocrates, Aristotle, Rufus, Galen, Paul of Aegina, and Polemon. Already by the beginning of the 11th century, it had been translated into Greek and widely distributed.

Its popularity in Jewish circles is attested by the fact that it was translated twice into Hebrew, namely, by an anonymous translator under the title *Yair Nativ* in 1124, then by Moses ibn Tibbon in 1254 under the title *Zedat ha-Derakhim*, and finally by Abraham Ben Isaac as *Zedah la-Orehim*.

The Hebrew translation by Moses ibn Tibbon was one of the main sources for Moshe Narboni's medical compendium called *Seffer Orah Hayyim* (composed 1350), as already recognised by the

anonymous scribe of the MS Munich 243. R. Judah ben Samuel ibn Abbas (13th cent.) recommends in his *Sefer Ya'ir Nativ* students to read as part of their curriculum the *Zedat ha-Derakhim*.

Translated into Latin by Constantine the African in 1124 under the title *Viaticum peregrinantis*, and commented upon by the Salernitas masters as from the thirteenth century. Ibn al-Jazzar's *Zad* became one of the most influential medical handbooks in medieval Europe. Being accepted into the so-called *Articella* or *Ars medicane*, a compendium of medical textbooks, it was widely used in medical schools (Salerno, Montpellier), and in universities (Bologna, Paris, Oxford).

It not only offered a traditional pathology, but also new objects of reflection for the Westerners physicians. The first book, dealing with the disease of the head, complemented the information on the cerebral functions given by Nemesius of Emesa (4th cent.) in his medical encyclopaedia called *Kamil al-sinaá al tibbiya* or *al-Kitab al-malakt*.

The chapter on melancholy was, next to Ishaq ibn Īmran's monograph on the subject, the point of departure for further developments in Christian Western Europe, where this concept played a prominent role in medicine and literature. The mental pathology of the *Zad* stressed the role played by the malady called 'ishq (passionate love). Translated by Constantine as *eros* and by one of his students as *heros*, passionate love turned into "heroic passion", a disease most of all affecting noblemen, and frequently discussed in Western medicine, philosophy and literature. The section on women's disease was the major source for one of the Trotula treaties on gynaecology produced in Salerno in the 12th century, namely, the *Cum Auctor*.

Besides the three *Kitab* which are mentioned by Sezgin (2000: 304-307) in GAS mentions ten others;

1. *Abdal al-'Aqqir* (The Making of Drugs)
2. *al-Mi'da* (The Stomach)
3. *fi Siyasat as-Sibyan wa-Tadbirihim* (Take Care of Children)
4. *Tibb al-Masayih wa-Hifz Sihhatihim* (Medicine for the

Ages and Maintaining their Health)

5. *fi Funun at-Tib wa-l-'Itr* (The Art of Medicine and Pharmacy)
6. *al-Hawass* (The Palms)
7. *Sein Traktat an einen Sultan uber das Vergessen und das* (This is the latin manuscript of *Kitab an-Nisyan wa-Tharqu Taqwiyah adz-Dzakirah / Forgetfulness and its Treatment*)
8. *al-Bugya* (The Needed)
9. *al-Ahgar* (The Stone)
10. *al-'Udda li-tul al-Mudda* (The Length of Waiting Period)

On the other hand, Brockelmann (1996: 274-275) in his GAL, mentions only twelve *Kitab* which are considered as al-Jazzar's works. All those twelve *Kitab* are mentioned by Sezgin.

In 1989, *Markaz Ihya' at-Turats al-'Ilmi al-'Arabi* of Baghdad published a book under the title *Ibn al-Jazzar al-Qayrwani: Siratuhu, Mu'alafatuhu, Juhuduhu fi at-Tibbi wa ash-Shaidalah* (Ibn al-Jazzar al Qayrwani: Life, Work and Focus on Medicine and Pharmacy). Unfortunately, Gerrit Bos did not mention this book in the bibliography. Perhaps he did not consult the list of al-Jazzar's works which are mentioned by the author Husain (1989: 39-41). They are:

- a) 33 books on medicine, pharmacy and biology,
- b) two books on history,
- c) one book on geography,
- d) two books on philosophy, and
- e) two books on ethics and Arabic

From the list of al-Jazzar's works which are mentioned by Sezgin *Funun at-tib wa-al-'Itr* is not mentioned in the list given by 'Adil Muhammad 'Ali al-Syaikh Husain.

D. The Manuscripts

In the introduction of *Ibn al-Jazzar on Fever*, Bos (1997: 2-3) explains the manuscripts which he consults to write his critical edition. They are:

1. Berlin 252 (=Qu 683); Judeo-Arabic. Book 7, chapter 1-6 cover fols. 130-144; the text is written in a clear oriental script. It was probably copied in the 14th-15th century. In this critical edition it bears the sign B
2. Dresden 209; the *Zad* covers 303 folios. Book 7, chapter 1-6 cover fols. 248-267; this manuscript is in general not very correct: it is unvocalised, while diacritical points are sometimes omitted and often confused. It has been copied by four different hands:
 - a. from fols. 1-78, the handwriting is rather correct
 - b. fols. 79-269, different handwriting, very untidy in fols. 250-260
 - c. fols. 270-288, different handwriting, regular and correct
 - d. fols. 290-339, different rather careless handwriting; fols. 290 and 291 contain marginal passages taken from the Koran as a remedy for scabies, probably added by a pious copyist;The copying of the manuscript was completed in the year 109/1680. In this text edition it is indicated by the sign D.
3. Oxford, Bodleian Huntington 302. Book 7, chapter 1-6 cover fols. 179-195. The text, vocalized and provided with diacritical points, was copied in the year 738/1337, and is therefore the oldest surviving manuscript. It is indicated in the edition with the sign O.
4. Teheran, Malik 4486, unnumbered. The text is unvocalised, but provided with diacritical points; it was copied in the year 994/1586. The copyist was rather careless and did not understand the text in hand very well; this has resulted in many corruptions and omissions. It is indicated in the edition with the sign T.
5. Izmir, Milli 50/470 (26636). Book 7, chapter 1-7 cover fols. 145-156. the text is partly vocalized and was copied by Zayn al-'Abidin on 4 Shawwal 972 H (1564). In general this text provides good readings with the occasional

mistake typical for a copyist. In many cases it has reading similar to those of MS Teheran, indicating a common ancestor.

Beside these five manuscripts, Gerrit Bos mentions three other manuscripts which he could not obtain: Algeirs 1746, fols.1-75, 10th century Hijriya or 16th century A.D.; Cairo VI, 37, *tibb, maj.* 37 m (fols 1-39a, 11th cent H/17th cent A.D) and Rabat 1718 (fols. 1b-222a). Other manuscripts which Gerrit Bos did not consult are manuscript Copenhagen 109 and Paris 2884 since, according to Bos (1997: 3), these manuscripts “have been copied from manuscript Dresden”. For this critical edition, Gerrit Bos mainly uses Berlin, Izmir, Oxford and Teheran (BIOT) manuscripts. The main reason, for him, is that these four manuscripts preserve more complete readings from that of the Dresden manuscript (Bos, 1997: 4).

In his *GAS*, Sezgin mentions two other manuscripts of *Zad al-musafir* namely, Dublin, Chester Baetty 5224, fol. 50b-88a and Washington, Army Medical Library 92/1 fols. 1-73. However, these two manuscripts do not contain *Zad al-musafir* but this are manuscripts of *Tibb al-fuqara' wa-l-masakin* (medicine for the poor). Unfortunately, Bos does not give more explanation on this matter since he has dealt with it in his previous critical edition on al-Jazzar.

Even though there are many manuscripts available, “it proved to be impossible to establish a stemma precisely defining the relationship of these manuscripts, because of the contaminated state of the tradition” (Brockelmann, 1996: 274). Moreover, it is impossible to do further clarification based on the manuscripts which are available at the moment (Bos, 1997: 1).

In *Geschichte der Arabischen Litterature (GAL)*, Brockelmann (1996: 274) mentioned five manuscripts of the *Zad*, which are mentioned also by Gerrit Bos, they are: Dresden 209; Havn 109; Bodl I, p. 135, II, 528; Paris 2884 and Alger 1746. Since Gerrit Bos did not mention Brockelmann’s *GAL* in the bibliography and only mentioned Fuat Sezgin’s *GAS*, perhaps he did not consult the list of manuscripts in *GAL*.

E. Critical Edition by Gerrit Bos

The critical edition of *Zad* by Gerrit Bos consists of three parts. The first part is the introduction which describes the biography of al-Jazzar, the manuscripts which are consulted and the summary of the book. Bos (1997: 1) presents the biography and the work of al-Jazzar in brief since, as he mentioned in page 1, readers can get the biographical and bibliographical data of al-Jazzar in his critical edition of book 6 of *Zad al-musafir*. On the one hand, Bos does not have to present twice the biography al-Jazzar, on the other hand, readers will face inconvenience since Bos' critical editions are separated. If Gerrit Bos writes a series of critical edition of *Zad* then he does not have to write the al-Jazzar's biography in each edition. However, Gerrit Bos does not do this, consequently he should write al-Jazzar's biography in each edition in order to provide a good critical edition.

His summary is very comprehensive since he presents chapter by chapter including the introduction. According to Bos (1997: 7), the way al-Jazzar starts the discussion on fever is different from that of other physicians such as Ibn Sina or al-Majusi. Instead of giving the definition of fever, in the beginning of his work al-Jazzar quotes Galen's word who described fever as "the most dangerous disease, the messenger of death, and the most frequent cause of the end of life"

In the summary of book 7 chapter 1-6 of *Zad*, Gerrit Bos compares al-Jazzar work on fever with those of Ibn Sina and al-Majusi. After presenting al-Jazzar's opinions in a certain topic, Bos (1997: 5) mentions the discussion about the same topic from Ibn Sina and al-Majusi. The topics which are compared are "the aethiology, symptology and treatment of different fevers". Often, Bos also looks at Galen's who, according to Bos, was the "major source of al-Jazzar" and Paul of Aegina's work.

Al-Jazzar had a certain scheme in order to discuss the different fevers; firstly al-Jazzar gave a "very concise aetiology, then a more extensive symptology, while most of his attention goes to the different ways of treatment of the disease" (Bos, 1997: 6).

Even though al-Jazzar did not discuss the mixed fevers in the *Zad*, since “their diagnosis and treatment is too complicated” he “was not blind to its limitation, and recognized at a certain moment the necessity for the composition of a new work, namely, the *Tibb al-fuqara wa-l-masakin*.” (Bos, 1997: 6)

The second part of the book is the Arabic text of the Book 7, chapter 1-6 of *Zad al-musafir wa-qut al-hadir* (p. 24-96). In this part Gerrit Bos gives notes on the Arabic text, mostly about the variant readings which he consulted from the manuscripts. He uses footnotes to present the varieties of the reading. Even though he uses the Latin number in numbering the lines, he uses the Arabic number in footnotes. By looking at footnotes, readers can compare the variant readings from each manuscript. By looking at a letter which is written after the Arabic texts, readers can recognize the differences among manuscripts.

Even though Gerrit Bos recognizes variant readings among the manuscripts which are used, he does not give any explanation about the cause of variant readings. In *The Technique and Approach of Muslim Scholarship*, Rosenthal (1947: 30) presents many sources for variant readings. Firstly, the author himself made changes in the copy of his works during his lifetime, even after publications, since the author “may have been aware of the confusion which might result from such alterations after publication”. The second source of variant readings was the blank spaces which were intentionally left by the author or the writer. These blank spaces were left by the author for “the later insertion of data which were not known to them at the time of writing”. Another source for variant readings is “due to the fact that somewhere in the course of transmission, the text of a work was corrected by scholars or copyists” (Rosenthal, 1947: 33).

In the case of al-Jazzar’s work, the source of variant readings might be happen through what Rosenthal called as “the course of transmission”. In the description of the manuscripts, Gerrit Bos describes how the manuscripts’ handwritings are. In the Dresden manuscript, for example, one the copyists added some

Koranic verses that do not exist in other manuscripts. In another manuscript, there are some omissions and corruptions of the text such as in manuscript Teheran and there is “the occasional mistake typical for a copyist” such as in Izmir manuscript. Since none of those manuscripts are autographs, it is impossible that the variant readings were made by al-Jazzar. Moreover, the oldest manuscript consulted by Gerrit Bos was copied more than 300 years after al-Jazzar’s death.

As already mentioned above, Bos (1997: 4) argues that it is impossible to establish stemma “because of the contaminated state of the tradition”. Moreover, the long period which has evolved between the life of al-Jazzar and the oldest manuscript seems to support this impossibility. According to Witkam (1988: 88) “the supposition of the existence of the ‘lost manuscript of the author’” and “the presumption that a long period has evolved between the lifetime of the author and the date of the oldest existing manuscript of the text” are significant to the textual criticism. Since there is no autograph and the long period has evolved, establishing the stemma might be very difficult.

After the Arabic text, there is the English translation of the Arabic text (p. 97-138). In this part Bos (1997: 97) gives footnotes on some term such as “*ajal*” (end of life), “*sahj*” (dysentery or the like) (Bos, 1997: 120) and “*daniaq*” (a weight scale which is one *daniaq* varies from 0, 52 until 0, 74 grams) (Bos, 1997: 126). Since the English translation is separated from the Arabic text, the readers will find it difficult to consult to the Arabic text. Unfortunately, Gerrit Bos does not give the Arabic page for the English translation. By giving the page or line number of the Arabic text in the translation, readers will find the Arabic text easily.

The last parts of this book are glossaries, indexes and bibliography. Gerrit Bos gives the Arabic glossary and English glossary. The Arabic glossary is divided into two parts: glossary of *materia medica* (p. 139-149) and glossary of technical terms (p. 151-192). On the other hand there is only one English glossary that is glossary of technical terms (p. 195-210). In the glossary of

materia medica Gerrit Bos provides the English translation of some Arabic words. Unfortunately, there is no English translation for the Arabic technical terms and there is no Arabic term for the English indexes.

The Arabic index of proper names in page 193 presents only three names, while the English index in page 211-212 is more. While names in the Arabic index are taken from the text, names in the English index are taken from the text translation and the footnotes. Gerrit Bos presents the English index in alphabetical order without distinguishing the names taken from the English translation of the text from those of the footnotes. Without looking at the translation, readers will find it difficult to distinguish which names are in the text translation and which are not.

In the bibliography of this book in page 213-217, Gerrit Bos mentions only one printed edition of *Zad al-musafir wa-qut al-hadir*. This printed edition is edited by al-Radi Suwaysi and this is only the book 1-3 of *Zad*. Instead of making separation between the primary source and the secondary source, the bibliography is presented in alphabetical order. This makes it difficult for the reader to distinguish the main book from the complement books.

The sources used by Gerrit Bos are varied. There are some Arabic book such as the books of Ibn Sina, al-Majusi and al-Radi Suwaysi. Other sources which are used by Gerrit Bos are the works of Galen and other Greek scholars such as Paul of Aegina and Hippocrates. These Greek sources are used in the English translation of the text in order to give more explanation concerning the text. Other sources are related to medicine such as the work of Mirko D. Grmek *Diseasea in the ancient Greek world* and Monica H. Green *The transmission of ancient theories of female physiology and disease through the early Middle Ages*. Furthermore, there are some sources on Arabic such as E.W. Lane *Arabic-English Lexicon* and G.W. Freytag *Lexicon Arabico-Latinum*. These sources seem adequate to this critical edition.

Index Islamicus reported two articles about al-Jazzar which were published in 1983. They are the works of Daremberg

and an anonym author which are given introductions by Ibrahim Ben Murad. The work of Daremberg originally was published in 1851 and this work deal with *Zad al-musafir*. Another work, which is anonym deals with *Kitab al-I'timad*. These two articles are not mentioned in Bos' bibliography even though they were published long before Bos' ctitical edition on al-Jazzar.

F. Conclusion

The critical edition of book 7 chapter 1-2 of *zad al-musafir wa qut al-hadir* by Gerrit Bos presents comprehensive information about one of al-Jazzar work. Perhaps, Gerrit Bos has conducted a deep research before writing the critical edition. He provides much information, such as glossaries and indexes, related to the text and the manuscripts. Unfortunately, readers cannot get the comprehensive information about the author (Ibn al-Jazzar) from this critical edition. Biography and works of al-Jazzar can be found in another work of Gerrit Bos.

Although there are many inconveniences in reading the text such as consulting the English translation to the Arabic text, this critical edition is a great contribution in the academic world especially in the studies of medical work of Arab physicians. This critical edition is magnificent since this is the first critical edition dealing with fever that has been published.

REFERENCES

- Bos, Gerrit, *Ibn al-Jazzar on fevers*, London and New York: Kegan Paul International, 1997.
- , *Ibn al-Jazzar on women's diseases and their treatment*, London: Kegan Paul International, 1997.
- Brockelmann, Carl, *Geschichte der Arabischen Litterature (GAL)*, Leiden (etc.): E.J.Brill, 1996.
- Husain, 'Adil Muhammad 'Ali al-Syaikh, *Ibn al-Jazzar al-Qayrawani: siratuhu, mu'alafatuhu, juhuduhu fi at-Tibbi wa ash-shaidalati*, Bagdad : Markaz Ihya' at-Turats al-'Ilmi al-'Arabi, 1989
- Rosenthal, FR., *The Technique and Approach of Muslim Scholarship*, Roma, Italy: Pontificium Institutum Biblicum, 1947
- Sezgin, Fuad, *Geschichte des Arabischen Schrifttums*, Frankfurt am Main: Institut für Geschichte der Arabisch-Islamischen Wissenschaften an der Johann Wolfgang Goethe-Universität, 2000.
- Witkam, Jan Just, "Establishing the stemma: fact of fiction?", *Manuscript of the Middle East 3 (1988)*, Leiden, 1988