

# Thousand-year anniversary of the historical book: “Kitab al-Qanun fit-Tibb”-The Canon of Medicine, written by Abdullah ibn Sina

The Islamic scientific thought developed on the crossroads of the oldest civilizations, in the space of constant tensions and riots. The development of the Islamic golden civilization is marked with the religion Islam and the influence of the Hebrew, Hellenistic, Persian, Christian and other traditions and cultures. The Islamic scholastic philosophy revived the ancient Greek philosophy and preserved the heritage of Aristotle and Plato for the European renaissance. One of the greatest names of the falasifa-hellenistically inspired philosophy-was Abdullah Ibn sina (Avicenna, 980-1037).

Ibn Sina, seen by some as a representative of pure aristotelism, by others as a neoplatonic, by the maority as an unique thinker whose spirit made it to the heights of geniality, a man whose books were burned by some khalifahs and banned by the Church, is mentioned in Dante’s “Divine comedy” as one of the good people who did not know Christianity or were not Christians in the first circle of “Inferno” together with Aristotle, Plato, Heraclitus, Hipokrates and Averroes. His opus contains about three hundred works-46 on philosophical topics, 44 on medical, 81 works on astronomy and natural sciences and over 70 works on different religious topics.


He gained glory with the work “Kitab al-Qanun fit-Tibb” (The Canon of Medicine) an enyclopaedia of medicine in five books, translated into Latin in the 13<sup>th</sup> century by Gerardo de Cremona. The Canon of Medicine was the medical authority up until the 17<sup>th</sup> century and was setting the standards for medicine in Europe and the Islamic world.

“Al-Qanun fit-Tibb”-, The Canon of Medicine“, is a recapitulation of the medicine of that time. It was written in five books: Book I-General principles, Book II-Materia medica; Book III-Diseases of the individual

organs; Book IV-General diseases; Book V-Formula for remedies. This work is very similar to the works of Avicenna’s predecessors Muhammad ibn Zakariya al-Razi and Ali Ibn Abbas Al-Majusi, who presented the doctrine of Hippocrates, modified by Aristotle and Galen. Yet, the Canon was more systematic and logical than other medical scriptures of that time, containing references of books of previous physicians, enriched and modified with Ibn Sina’s own reflections. The Canon was translated into Latin and had 15 Latin editions. The Canon was the main textbook at the medical schools at Louvain and Montpellier till 1657. No medical book was studied to this amount in more then 600 years. Ibn Sina started writing this work in 1012, exactly thousand years ago, and finished it in 1024. He made the rules for experimenting and he was the first to conduct the modern scientific method. In this experimental method, the true genius of Ibn Sina’s originality could be seen; in it is his glory not only as a doctor, but as a philosopher, since many of his philosophical teaching came out from his scientific method.

### The characteristics of the islamic civilization and science

The scientific contribution of the Islamic scholars to the scientific world is immense; from trigonometry and algebra to optics, chemistry, astronomy and other scientific disciplines. Massive translation and copying projects made Greek, Roman, and Sanskrit knowledge available to Islamic scholars across the empire. Medieval Europe received the Hellenic classics that made the Renaissance possible mostly through Arabic translations. Building on Hellenic, Persian and Hindu sources, physicians within the Islamic Empire advanced medical knowledge enormously. Perhaps, their most significant single achievement was the establishment of medicine as a science based on observation and experimentation, rather than on conjecture. Islamic scientists developed the rudiments of what would later be called the scientific method. The Islamic scholastic philosophy revived the ancient greek philosophy and preserved the heritage of Aristotle and Plato for the European renaissance. One of the greatest names of the falasifa-hellenistically inspired philosophy-was Abdullah Ibn sina (Avicenna).<sup>[1-15]</sup>

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### Abdullah Ibn Sina-the characteristics of his philosophical opus

Ibn Sina, seen by some as a representative of pure aristotelism, by others as a neoplatonic, by the majority as an unique thinker whose spirit made it to the heights of geniality, a man whose books were burned by some khalifahs and banned by the Church, is mentioned in Dante's "Divine comedy" as one of the good people who did not know Christianity or were not Christians in the first circle of "Inferno" together with Aristotle, Plato, Heraclitus, Hipokrates and Averroes.<sup>[1,6-8]</sup>

Avicenna, or Abu Ali Al-Husayn ibn Abdullah ibn Sina, the islamic philosopher, physician, poet, mathematician, politician was born in Afshanahu (Belkha) near Bukhara, Persia.<sup>[1,3,5]</sup> This town, in today's Uzbekistan, was already mentioned in the 5<sup>th</sup> century, and in the time of the Arabic conquest represented a trading and cultural center of central Asia.<sup>[2,4]</sup>

In Ibn Sina's time, the ruling Persian dynasty of this land were the Samanids. In their royal library Ibn Sina, who was already a physician at the age of 16 and knowledgeable in the fields of literature, law, logic, mathematics and metaphysics, got to know the works of the Ancient Greek philosophers.<sup>[1,9,10]</sup> In the next two years, he studied all those books, many of those he never had the chance to read again in his life.<sup>[1]</sup> After this period, according to his own words, nothing was added to his knowledge, he only got more mature.<sup>[2]</sup> Unfortunately, the Samanid royal library vanished including all books in a fire during an invasion when the Turks gained power.

The most famous ruler of the middle-asian Turks Mahmud Gamin ad-Daula had a special method in bringing the most famous names of art and science to his court in Gazna-he would take the best artists and scientists as a tax from the conquered lands. This way Ibn Sina finds himself on the court of Gazni. Later he settles in Isfahan and Hamadan in Persia, where he died in 1037.<sup>[5]</sup>

Ibn Sina read a lot, but also wrote a lot. His opus contains about three hundred works-46 on philosophical topics, 44 on medical, 81 works on astronomy and natural sciences and over 70 works on different religious topics.<sup>[1]</sup>

He gained worldwide glory with the work "Kitab al-Qanun fit-Tibb" (The Canon of Medicine) an encyclopaedia of medicine in five books, translated into Latin in the 13<sup>th</sup> century by Gerardo de Cemone. The Canon of Medicine was the medical authority up until the 17<sup>th</sup> century and was setting the standards for medicine in Europe and the Islamic world.<sup>[1,2]</sup>

His book "Kitab Al-Shifa" (The Book of Healing) is a philosophical work that was a matter of debate for years

in the Muslim and Non-Muslim circles. Despite its title, it is not concerned with medicine, but it is intended to heal the ignorance of the soul.<sup>[2,4]</sup>

It consists of 18 books divided into logic, mathematics, physics and metaphysics and is considered a scientific and philosophical encyclopaedia of his time. Because of its contrary to the orthodox teachings, the khalifah ordered the book to be burned in 1160, in Baghdad. Only some fifty years later, in 1210 and 1215, the Christian Church gave orders to burn his book and banned further interpretations of Aristotles.<sup>[1]</sup> This philosophical compendium was partially translated into Latin under the title "Sufficiencia" in the 12<sup>th</sup> century. In 1495. and 1500. His works were published in Venice under the title "Opera"-a compilation of 7 books (Logica, Sufficiencia, De Coelo et Mundo, De Anima, De Animalibus, Intelligentia, Philosophia prima).<sup>[1,2]</sup>

Ibn Sina called his own work on logics and philosophy "eastern" in contrary to the "western" approach of the Baghdad school of logic. Ibn Sina despised the Baghdad school because it taught logic only through studying Aristotles books. However, Ibn Sina implemented in his logic besides Aristotles also materials from Galen and the Stoics. He could discern the empirical truths from the logical essence of things. Ibn Sina believed that an object is known to us not for its importance but for what it does (for its function) and that natural science does not include the essence of things, because it investigates only the cause of that which we know from our experience. According to Ibn Sina, by comprehending the cause from the consequence we cannot comprehend the essence of the cause, but only the facts.

In his books Kitab al-Ishart wal-Tanbihat and Kitab al-Najat (The Book of Remarks and Admonitions and The Book of Salvation), Ibn Sina presented his theory of intelligence and its relation toward the theory of intuition, and the first speaks about the floating man.

"Imagine a man created all at once and in perfect bodily condition, but whose eyes are screened so as to prevent him from perceiving external things. Imagine further, that this man floats in empty air [vacuum] in such a manner that he has no sensation, not even such as may be caused by the touch and friction of air. That man would still be capable to think about himself and to affirm, with utmost certainty, that he exists, although he would not be able to prove even the existence of his own body or of any other external object."<sup>[1]</sup>

This kind of cognition is intuitive and can be acquired through the self by establishing a connection with active intelligence by means of a reflection on what is inside of us. That is why; it is possible for one to find the

truth on one's own.<sup>[2]</sup> It is through our intuition that we comprehend those hidden truths which evade the sensual observations and rational opinions. The highest level of intuition, according to Avicenna, is the prophetic intuition, and only those whose souls are so pure that they get the forms of all things contained in the active intelligence imprinted on them all at once so that the essence can be reached immediately.<sup>[1]</sup> This is how the intuitive, metaphysical cognition becomes a way of identifying with the Absolute One out of which everything springs. The influence of Neo-Platonism could be seen in Ibn Sina's theory of emanation. Trying to connect it with the Islamic views, Ibn Sina goes into mysticism. By the end of his life, Ibn Sina wrote a number of mystical pieces in the form of symbolical sayings and a poem about the descent of the soul into the body. One poem by Abu Sa'id, a famous Persian mystical poet, preserves a memory of an encounter with Ibn Sina when the two of them stayed in one room for three days and three nights, except when they went to pray. After their parting, Ibn Sina was asked to give his impressions about Abu Sa'id. Ibn Sina replied: "All I know, he sees." When Abu Sa'id was asked by his students about Avicenna, he answered: "All I see, he knows," and added: "Those who are satisfied with the appearance of things are dead already on this world, while the truth seekers live even after they die." The truth of this statement could be witnessed even in a short account of Ibn Sina's influence on the western and eastern philosophers.<sup>[1]</sup>

Ibn Sina influenced Albert the Great (Albertus Magnus at the University of Cologne in 1358) and his student Thomas Aquinas (also known as Thomas of Aquin or Aquino). Aquinas mentions him on almost every page of his *De Ente et Essentia* (*On Being and Essence*), the corner stone of his metaphysics. E. Gilson, a French catholic philosopher, describes Ibn Sina's influence on the Catholic Scholastics, especially on Duns Scot, as the period of Augustinian Avicennism. The most significant representative of Latin Avicennism was William of Auvergne. William of Auvergne used Ibn Sina's definitions, his classification of science and his ideas from the field of theology.<sup>[2]</sup> A large number of philosophers accepted Ibn Sina's theory of cognition. Ibn Sina influenced Roger Bacon and his Illuminism. Ibn Sina was developing his philosophical system on the ground of the rich Greek tradition enriching it with his own unique reflections. He combined Aristotles, Plato and Plotin in an extraordinary way, believing in the immortality of the soul and searching for the higher being closer to us than our own self. The reflections are seen in the verses of the poet Khusraw, Ibn Sina's contemporary:

Know yourself; only that  
 Shall show you the border between good and evil.  
 First become one with the self,  
 To become a guide for everything.

When you know yourself, you know everything;  
 When you know that, reject all the evil.  
 You don't know how much you are worth,  
 Because of the picture;  
 If you see God alone, you see yourself.  
 Nine spheres and seven stars serve you,  
 And you still serve your body: alas!  
 Don't devote yourself to pleasures only  
 If your sight seeks the utmost happiness.  
 Be a real man, dream and fast;  
 Like a pilgrim, go on a journey into your own self.  
 Abdullah ibn Sina as a physician

Ibn Sina was practicing medicine and was an accepted physician already in his youth.<sup>[1-3]</sup> He learned medicine from books by himself and considered it to be not too difficult, in his own words: "Medicine is no hard and thorny science, like mathematics and metaphysics".<sup>[1]</sup> The researchers differ in opinion whether he had greater influence in the field of medicine or in the field of philosophy; to consider him primarily a philosopher or primarily a physician. Philosophy at that time was a comprehensive theory of all knowledge known to man. Philosophers of this time were all polymaths. Al-Kindi, the famous Arab philosopher, wrote about astronomy, geometry, music, physics, metaphysics and was a practising physician. The same description is the of AL-Farabi who wrote "Ihsau el-Ulum". Ibn Rushd later compiled medicine and philosophy in a book called "Al-Kullijjat".<sup>[2]</sup>

Ibn Sina and Ibn Rushd, following the Aristotelic method, both compiled medicine and philosophy. Aristotle was one of the followers of the Asclepiades, the masters of medicine in the Greek polis, and his father was the personal physician of King Amyntas III of Macedon. Ibn Sina himself accepted the methods of the peripatetic school and wrote the "Al-Qanun fit-Tibb"-as a guideline for curing the physical body, and "Al-Shifa"-as a guide for curing the soul.<sup>[12,14,15]</sup> The Canon is an encyclopaedical work in its essence, divided into 5 books. The first book explains the general concepts of medicine, theoretical and philosophical principles, or in his own words: "About the essence of organs and their parts, of bones, muscles, nerves, arteries and veins", about classification of diseases, their causes, symptoms and principles of healing.<sup>[1]</sup>

In the second book he explains the principles which must be known by everyone who practices medicine and the healing power of medication. The other three books discuss the practical part of medicine, in his words "what preserves the health and what helps maintaining it", beginning with the diseases of the head, ending with the diseases of individual organs. The fifth book discusses the composition of medications, pharmacology.

### **Ibn Sina's medical skills in the canon**

"Al-Qanun fit-Tibb", The Canon of Medicine, is a recapitulation of the medicine of that time.<sup>[1,2,5,11,13]</sup> It was written in five books: Book I-General principles, Book II-Materia medica; Book III-Diseases of the individual organs; Book IV- General diseases; Book V-formula for remedies. This work is very similar to the works of Avicenna's predecessors Muhammad ibn Zakariya al-Razi and Ali Ibn Abbas Al-Majusia, who presented the doctrine of Hippocrates, modified by Aristotle and Galen. Yet the Canon was more systematic and logical than other medical scriptures of that time, containing references of books of previous physicians, enriched and modified with Ibn Sina's own reflections. The Canon was translated into Latin by Gerardo de Cremona, an Italian translator of Arabic scientific works, and had 15 Latin editions. There were also translations into Hebrew. According to Browne, the translations of The Canon contain many incorrect and barbaric words. Yet the Canon was the main textbook on the medical schools at Louvain and Montpellier till 1657. No medical book was studied to this amount in more than 600 years.

Every one of these 5 books-kitab, is divided into parts-fen, chapters-taleem, sub-chapters-jumla, and sections-fasal. This division was strictly respected, even though this kind of organization was confusing in some cases. The paragraphs and the numbering was added by the translators.

Sir William Osler, described the Canon as "the most famous medical textbook ever written" noting that it remained "a medical bible for a longer time than any other work."<sup>[10]</sup> George Sarton, the author of The History of Science, described Ibn Sina as "one of the greatest thinkers and medical scholars in history". The nature of knowledge presented in the Canon: The equivalent of the Arabic word Qanun is code of law, a series of principles. A principle is defined as something that precedes, that represents the true positive influence on a consequence. In the light of this meaning, the Canon should be seen as a work based on principles and reflections.

The Canon is a precise and comprehensive text of Ibn Sina's knowledge. It is obvious from the works of Ibn Sina that he deeply emerged in the fountain of knowledge of the Greek philosophy and medicine. He presented most of the Materia medica from Dioscorides and most of the anatomy from Galen. There is proof that Ayurvedic works were accessible in Arabic language from the 7<sup>th</sup> century, and the Canon holds references to these works of Indian physicians. Some descriptions from the Canon, like the description of the pulse, are similar to those in the Chinese ancient medicine. Ibn Sina not only collected and systematized medical knowledge of his time, but put further contributions

to it. The Latin translations of Islamic works, especially Ibn Sina's Canon of Medicine, had an important place in the universities in Europe. In the great center for medical studies in Montpellier, the first and fourth book of the Canon were included in 1340. in the official literature. The universities of Leipzig and Tuebingen included Ibn Sina's Canon from 1481. in their medical curriculum. Ferijar, in his Book of Medicine, cited Hippocrates 140 times, Al-Razi and Galen 1000 times and Ibn Sina 3000 times! The medical curriculum at the Vienna University and University Frankfurt on the Oder in 1598. are mainly based on the Canon.<sup>[2,4]</sup>

The Canon describes medicine as knowledge that can be adopted as medical education and personal guidance even by a common person. He states in advance, that he discusses elements, humor, tempers, simple and combined organs, vital forces, physical powers, functions and states of the body connected to health, disease and in between states; causes such as food, water, air, habits and accommodation, elimination, profession, physical and mental activities, age, gender, external factors influencing the body; maintenance of health and the treatment of different diseases, together with food and water management, air, regulation of rest and activities, the use of remedies and operative procedures.

The science on organs and their function (anatomy and physiology) is represented in the Canon as a unique subject on functional anatomy-general, in the pre-clinical level and specific with diseases of individual organs. He recognizes diseases as disbalances in function and classifies them in disease of temperament, humor and structural patterns. The causes are described as inner and environmental; congenital and obtained; organic and functional; physical and emotional. Diagnosis is based on obtaining the history of disease and observation by the bedside. Therapy is allopathic including diet, medicine and physical measurements either in the specifics of the disease (its nature) or the constitution of the patient. Nurture of children, geriatrics and advice for passengers about the transmission of disease from contaminated and polluted water; advice on holding the breath-they are all described in the Canon in a surprisingly knowledgeable level including theory and practice. Book II I V sum up all of the ancient knowledge in the Materia Medica and mentions a lot of medicine unknown to the Greeks. Book III gives diagnosis and therapy for every individual organ, and book IV diagnosis and the treatment of diseases in general. Skin disease, sexual dysfunction, digestion problems and nervous breakdowns are missing in the Canon. Anatomy is represented only as the main guide and has several mistakes. In physiology, there is systematization on power and function, but without detail. Biochemistry is based on humeral concepts, and not on facts. Diagnostics is based on history of disease and observation, which is logical, considering the period in which the Canon was written.



Therapy is allopathic, but without the specific substitution of vitamins and hormones. Intravenous, hypodermic medications are unknown, as well as transfusions, and too much space is given to bleeding, vomiting, and cleansing. There are a few minor surgical repairments and removals, but there is no leading-main big surgery. There are rules on personal hygiene, and a complete lack of public sanitary measures. Incomplete contents are in the books III and IV, which are also unsuitable for today's time. Book I, considered by some authors, requires careful revision and backup.

The philosophy of Ibn Sina is set between the best of the Platoon's idealism and Aristotle's dualism.<sup>[1,2,12]</sup> Modifying his position with Empedocles' vitalism, he gives a unique view on object and life, body and mind. His method of observation and analyzing, with an adequate use of logic and intellect, his strict determinism and insisting on controlled experiment, gave medicine the opportunity to become a natural science. Ibn Sina believes in the unity of the human persona, as a union of the body and non-materialistic soul, and with this statement he goes in places besides the Cannon. From the scientific point of view, the specific strength and weakness of the Cannon lies in the passion of observing, classifying and generalizing. Ibn Sina's theory about the interaction of 4 causes explains disease as a product of 1) heritage, 2) environment, 3) strength of constitution and quality of temperament, 4) the strain of nature towards life and the integrity of function. Concept of which, Sina requires to be seen as the truth are the elements-symbols of mass and energy; temperament-energy pattern of body as a whole; humor-structural material for body and source of energy for labor; power-the strength or control of organs and their functions; and finally, the vital energy-metabolic energy for the organization and differentiation of life.

From the scientific point of view, as a method of study and analyses, today's scientist are direct descendants of Ibn Sina and his predecessors; Al-Razes, Galen and Aristotle. However, as the concept of science is continuously changing with the accumulation of new knowledge, Sina's way of presenting is a concept truthful for all times. This impression impacted on his descendants as if any other literature on medicine is unnecessary and so they acted repulsive (neglecting to consult any other medical literature), all of which had big influence on further progress in the centuries to come. This, in any case, is not Sina's mistake in presenting the Cannon to the doctors of general practice, and is no reason to avoid objective examination of the Cannon because of its useful ideas which he has left us as his testament.<sup>[1,4]</sup>

Besides Al-Qanun, Ibn Sina wrote many more disputes on medicine in which he answered the requests given out by doctors of his time, such as, "Risaletu fi el-evedvijeh

el-kalbijeh", "En-Nebd", "Al-Kulendz" etc. It is said that he also wrote poem rejjes on medicine, such as the one with a thousand verses; in which medical tuition is compressed.

The glory of Al-Qanun lies within its systematic writing in beautiful formulations which obtain all information needed. It was the main source of knowledge in the middle ages widely examined in madrasa schools in the East and universities in the West. Cremon translated Al-Qanun in Toledo, from Arabic to Latin. As soon as the Latin version was available, the book became a huge success so it was once again translated in local dialects. It was also decorated with very intense covering and illustrations, which can be seen from manuscripts that have withstood time and are from the thirteenth century. That is the time when "Al-Edevijeh and al-Kalibijeh" and the poem rejjes on medicine was also translated.

The European universities accepted Al-Qanun as the main source in studying medicine, especially in England and Scotland. The first one, who officially accepted it, was the University in Poland in the 13<sup>th</sup> century. From that time, Ibn Sina's Al-Qanun was conquering European Latin universities and schools and represented half of all the medical manuals in the rest of the universities in Europe in the fifteenth century. Al-Qanun remained at the top all until the seventeenth century, until the rise of the medicine based on experimental knowledge and methods. In 1650, Al-Qanun was studied only in two Universities: Louvain and Montpellier. From this short historical review, it is easy to understand why Ibn Sina is seen as a doctor more often than as a philosopher.<sup>[2]</sup>

Muslims inherited Greek medicine through two different schools: The first one is Hypocrite's and the second is Galen's. Besides this, Ibn Sina did not merely just follow these schools, he united them, synthesized their teachings and gave them a new Avicenna look, adding what he found out personally on experimental learning. The fast progress which followed is mostly because of his experiments. In his biography Ibn Sina says: "Medicine is not a difficult science, in it I set off in a short period of time, while other eminent doctors started reading about medicine, healing the sick, they opened the door of experimentation for me on what could be seen." Ibn Sina didn't give up on experiments, so he tried out many theories that could be found in Al-Qanun, some of them lost because he wrote them down on notes and died before adding them in the book.

Ibn Sina made the rules for experimenting and he was the first to conduct the modern scientific method. In this experimental method, the true genius of Ibn Sina's originality could be seen; in it is his glory not only as a doctor, but as a philosopher, since many of his philosophical teaching came out from his scientific method.

In addition to his classification of diseases on general and special, Ibn Sina explained ways of identifying diseases and treating every organ. Conducting experiments Ibn Sina found many medications for different diseases.

Although, surgery was not progressing immensely during his time, therefore, he was not able to perform large surgical procedures, Ibn Sina distinguished himself in the field of small surgical procedures, especially in connection with malignant tumors. This is described by Dr. Kazim Ismail, the dean of the Istanbul University, in his lecture at the Ibn Sina symposium i Baghdad: "Ibn Sina's views on carcinoma are correct. Taking in context, today's medicine there is no place for denying its significance. He analyzed precisely the tumor in the body, concluding that it appears more often in women. If the carcinoma is internal, it develops successively and there is no use of treatment. If the carcinoma is external, then treatment and cure is possible if the physician intervenes in the beginning when the tumor is still small and applies a surgical procedure to cut it off in its roots."

Ibn Sina was the first physician who claimed the appearance of tumors in the spinal cord possible. He was one of those who researched diseases connected to ventricular ulcer, dyspepsia and collitis-he was suffering himself of. He claimed, there are two different causes of dyspepsia. The first one is psychological, and the second one organic. This claim made him one of the first connecting psychological factors with occurrence of diseases.

We mentioned some of the diseases and procedures explained by Ibn Sina, now we can ask a question: What is the value of Ibn Sina's medicine in the modern time?

The answer to this question differs widely among the researchers. Some of them speaking about different aspects of Ibn Sina's medicine in Bagdhad or Teheran, claim him to be one of the greatest and many of his teachings and discoveries being followed till this age, as can be seen on the example of diabetes.

One of those scholars is Muhammad Vehbi. He claims that Ibn Sina discovered the blood stream 600 yers before William Harvey. Namely, Ibn Sina discovered that the embryo is connected to the placenta with two arteries, and later described the circulation of the blood over the liver to the heart. Further, he precisely described the consequences of stone building in the bladder almost as correct as it would be described in todays medical textbooks. He is the first who correctly described meningitis, and the difference between meningitis and other inflammation and similar diseases. He was the first physician who performed treatment by injecting a needle under the skin and the first who used anesthesia before performing surgery.

Although, these words contain magnification of the Islamic physician, most of it is true. There is no doubt that science progressed immensely from the 17<sup>th</sup> century till today. There

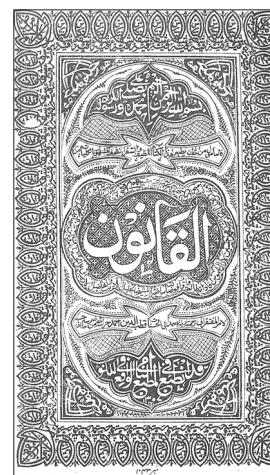


Figure 1: Cover page of the book "Al-Qanun fit-tibb", printed in Loknaw (India) in 1987, from Izet Masic's library (owner was his grandfather Ismail-eff. Masic, muderris)

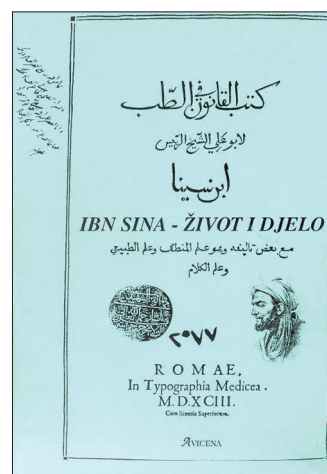


Figure 2: Cover page of the book written by Izet Masic et al. "Life and work of Ibn Sina - Avicenna", published in Sarajevo during wartime, in 1995

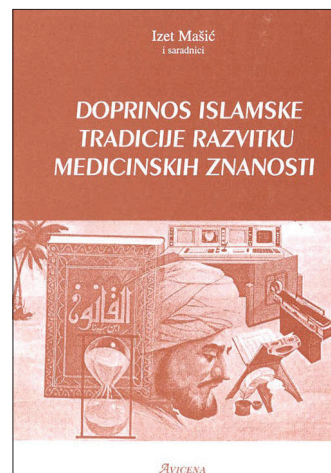


Figure 3: Cover page of the book written by Izet Masic et al. "Contribution of Islamic Tradition to Development of Medical Sciences, published in Sarajevo in 1997

is also no doubt that science cannot be perfected at once, but it takes phases and steps. The Ancient Egyptians, then the Ancient Greek, and then Ibn Sina contributed immensely to the development of science we know today. It is enough merit that his work was studied and taken as guide for hundreds of years by eastern and western scholars.

The author of this text had the opportunity to speak and exchange experience on Ibn Sina's scientific opus with the most prominent "avicennologists" of today professor Karl Holubar, medical historian from the University of Vienna, and professor Fuat Sezgin, Chairman of the Institute for Islamic Sciences in Frankfurt on Main and the editor of 100 Books of Islamic medicine (the author of this text is the owner of one of the 80 printed books of this edition).<sup>[14,15]</sup> and the author of the most comprehensive encyclopaedia of Islamic sciences, and professor Arslan Terzioglu from Istanbul, who wrote several books about Ibn Sina during his lifetime. The author owns two of the three examples of the Canon of Medicine in Bosnia and Herzegovina. One is a heritage from his grandfather muderris hadzi Ismail ef. Masic, from his own library.<sup>[16,17]</sup> This example was printed in 1872. in Loknau, India [Figure 1]. The third example is owned by the Gazi Husrev-beg's library in Sarajevo (founded in 1537.). This example was originally from the Karađoz-beg's library in Mostar copied in beautiful writing the Egyptian Abdurezzaq bin Nasiruddin al-Misri in the 16<sup>th</sup> or 17<sup>th</sup> century. The manuscript's first part is incomplete. It was torn apart and lost. The manuscript starts with the seventh fenn (chapter) about the adornments of the human body, starting with the hair. There is also a fourth example of the Canon in Bosnia and Herzegovina, in Russian translation, that belonged to the late professor Salko Ramic, professor of Chemistry at the Medical Faculty of Sarajevo.

The thousand year anniversary of the work "Al-Qanun fit-Tibb" by Abdullah Ibn Sina

Important events and personalities deserve to be written about, in order to introduce them and their achievements to new generations and to be an example of work and progress that is worthy to be followed.<sup>[9,10,18-20]</sup> This year 2012. marks the thousandth anniversary of Abdulah Ibn Sina beginning to write one of the greatest works in the history of medicine-the Canon of Medicine "Al-Qanun fit-Tibb". He was working on it for twelve years. It was translated into more than 30 languages and dialects. Even the comments on this work of another great scholar Ibn Nafis were translated into the Bosnian language in 1963. As "Mudgaz al-Qanun". The author of this text, together with his colleague Zoran Riđanović, did the editing of this work and printed it in 50 copies in the year 1995. in war-torn Sarajevo, while it was still under the siege. Today these copies are collectors items, and a

mark that the birth and realization of ideas cannot be stopped by darkness, cold, deficiency of food and material as it was the case during the Siege of Sarajevo from 1992-1995, when we were writing about the first and second Avicenna-Abdullah Ibn Sina and Allaudin ibn Nafis. As an old Arab proverb says "The rank of science is the highest rank" [Figure 2 and 3].

About Ibn Sina and his contribution to medicine, many books and papers were written in almost all parts of the world. All authors agree that he was a great historical personality and that his influence on the progress of medicine and science was immense. They also agree that there are certain exaggerations concerning his contribution, but they are united in the claim that The Canon of Medicine was something like a medical bible for hundreds of years, without medicine could not be studied.

Therefore, it was necessary to mention the anniversary of Ibn Sina beginning to write one of the greatest and most influential works in the history of medicine-the Canon of Medicine. Ibn Sina left us an eternal work that will surely be mentioned and maybe even used again in the future. Because Avicennism, or traditional, alternative, complementary medicine is marking its renaissance.

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