


 Jewish
Roots

SHABBETAI DONNOLO

Great Jewish Doctors of Our European Past

One of the first prominent Jewish doctors was Shabbetai Ben Abraham Donnolo (913 - c. 983 C.E.) who was born in Oria in southern Italy. The name Donnolo is the Italian form of domnulus, a diminutive of dominus, or master, thus "little master," and it is this nickname which he favored.

Southern Italy was part of the Byzantine Empire, which, from its capital of Constantinople, preserved Roman institutions in Italy, Greece, and parts of Asia Minor. During the period that Donnolo lived, Oria was at the crossroads of the Greco-Latin and Arab cultures. In 925 C.E., the area was captured by Saracen raiders, and Donnollo's description of what followed, as reported by A. Sharf, is illuminating:

I, Shabbetai, was ransomed in Taranto with my parents' money. I was twelve years old....My parents and my kinfolk were taken away to Palermo and to Africa, but I remained in the lands under Roman rule....There was no hard work...that I did not turn to, and behold, 'all was vanity and vexation of spirit and there was no profit under the sun....Then I saw that wisdom excels folly as light excels darkness'. For, while wisdom shelters, just as money shelters, 'wise knowledge gives life to them that get it,' according to the word of the Lord, the giver of wisdom. That is why I made great efforts to acquire learning, and to understand the science of medicine and the science of the

planets and constellations. I copied out for myself books by past Jewish scholars, blessings on their memory, but I did not find any Jewish scholar in all these lands who understood them. And, because they did not understand them, a few said that indeed there was nothing to be learnt from books by Jews on the constellations. This science, they said, was to be found among the nations, and their books were not written in accordance with the ideas in books by the Jews.

These were the reasons why my heart bade me explore the science of the Greeks, the Arabs, the Babylonians, and the Indians....After careful study, I found that in everything of the science of the planets and constellations, these books were the same as those by Jewish scholars: the opinions of all were correct and identical. Then I saw from the books by Jewish scholars that this whole science derived from Baraita of R. Samuel the Exegete. And the books by non-Jewish scholars also agree with this Baraita. It is just that Samuel made his book very difficult to understand...

We learn later from this autobiography that the young man responded to the trauma that struck his community and family by pursuing a medical career, which in turn provided him with the resources and the leisure time to explore his interests in astronomy, astrology, and philosophy. For Jews, study of astronomy was important in order to fix the calendar accurately, but astrology was generally considered to be a form of idolatry. Indeed, Donnolo's interest in astrology suggests that intellectually he had assimilated the culture of the non-Jewish world around him, since both the Greeks and the Arabs believed that disease is profoundly influenced by the position of the planets.

Donnolo was one of the leading medical authorities of his time and his writing had an important influence on later generations. He was familiar with the work of his Jewish predecessor Asaph haRofe, but rarely quoted from Biblical or rabbinic sources. His references were drawn mainly from classical Greek sources, and, significantly, not from Arabic medicine although he lived at a time when the latter was in its ascendancy. The historian Salo Baron noted that even great experts in all phases of Jewish lore, such as Maimonides, rarely referred to medical teachings reflected in Jewish sources. They usually quoted authorities like Hippocrates, Galen, or the more "modern" Arab physicians and only occasionally mentioned pertinent ethical teachings of their own sages. As was the custom of the time, Donnolo was both a pharmacist and a physician and his medical writings were largely based on his own experience. He was not a prolific writer, but fragments of a manuscript were discovered by the 19th century bibliographer Moritz Steinschneider. This work was a small book of medical prescriptions written in Hebrew, *Sefer ha-Mirkahot* ("The Book of Remedies"), sometimes called the *Sefer ha-Yakar* ("The Precious Book"). In it, Donnolo analyzed the preparation and use of 120 different drugs, derived mainly from plants, and included information about scents, the use of honey and wax as additives, and balsams (resins) as preservatives. He was the first European medical writer to mention alcohol (brandy or grape wine), which he used to compound tinctures. The *Book of Remedies* is the oldest Hebrew medical text of European origin extant and the earliest known Italian medical work of any kind from after the fall of the Roman Empire. It was one of the few medical works written outside of the monasteries where the bulk of medical literature was composed during the Middle Ages.

The introduction read, "This is the Book of Drugs, Potions, Powders, Emulsions and Unguents... to teach Jewish physicians, and to inform them of the way to prepare drugs in accordance with the science of Israel and Macedon (Hellas), and out of the author's practical experience acquired in the deep study and practice of medicine over 40 years, by the will of God."

Donnolo tried to prove that everything in man corresponds to some phenomenon in the world, for he viewed man as a microcosm of the universe, albeit under God's control:

"Just as God placed the two luminaries and the five planets in the firmament of heaven, so he created in man's head two eyes, a left eye and a right eye. The right eye is like the sun and the left eye is like the moon. The right nostril is like Mercury, the left nostril like Mars. Tongue, mouth and lips are like Jupiter, the right ear is like Venus, the left ear is like Saturn....

Just as God created man and beast and every living thing to dwell upon the earth, so God created the heart upon that membrane of flesh which is over the liver, and caused to dwell in the heart the breath of life. Just as he made beneath the earth the 'deeps,' mire, and mud, so he made in man the upper bowel and the intestines which receive food and drink. Now just as the waters from the mire and mud swarm with insects and reptiles, so do man's intestines swarm with the foul sediment of his food and drink. They swarm and teem with worms: long worms, short worms, worms great and small, thick and thin, worms in large pellets, worms like white hairs....The universe has its signs of the zodiac and those who observe the stars know how to foretell future events. Similarly, man has signs: when a man has a scab but no boils, lice or fleas, experts in such learning can tell his future by it. They can tell his future, too, by his build and by the cast of his countenance. This learning was possessed by wise men of old, but it has been forgotten in recent times...."

While no direct link has been established between Donnolo and the famous medical school in Salerno, the first school of medicine in Christian Europe, it is assumed that he must have had at least some indirect influence on the school for he was among the first important exponents in southern Italy of the newly awakened interest in science.



Jewish physician taking
the oath on graduation
Watercolor illustration from
the Gradenigo Dolfin manuscript,
Venice, c. 1750
Museo Correr, Venice

Science & Ethics:

3 JEWISH PHYSICIANS OF THE RENAISSANCE

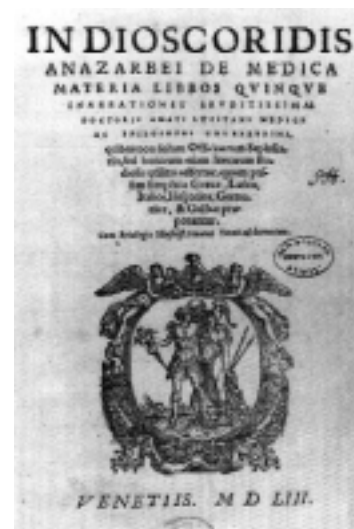
The life, works and ethics of the three physicians chosen for this essay were characterized by their deep commitment to the development of medical knowledge, but only insofar as it accorded with the dictates of ethical introspection. Amatus Lusitanus, Jacob Zahalon, and Abraham Zacuto all lived lives that were complicated by persecution directly related to their Judaism. Judaism set them apart and reinforced their belief in medicine as a profession in which ethics and medical science were fundamentally interwoven. As will be shown, their concerns, rooted in the past, can help all of us face the future.

AMATUS LUSITANUS

The life, works, and ethics of Amatus Lusitanus, according to the historian Solomon Grayzel, illustrate "the fate of the Jews and the part they continue to play in the diffusion of human knowledge." Cecil Roth, another historian, describes him as "the most distinguished physician of his age." Joao Rodrigues de Castelo Branco, who was later to be known as Amatus Lusitanus, was born in 1511 to Marrano parents in Portugal. He studied medicine in Spain at the University of Salamanca, receiving his degree in 1530. For a short period of time he practiced medicine in Lisbon and in 1533, when hostility towards Marrano physicians in Portugal significantly increased, he moved to Antwerp, in the religiously tolerant Netherlands, where he remained for seven years. There he established his reputation by treating many

prominent citizens, including members of the family of the noted Marrano statesman, Joseph Nasi, and by publishing his first book, *Index Dioscorides* (1536), on medicinal botany. His fame spread as a scientist, and in 1540 the Duke of Ferrara, Ercole II d'Este, who supported and encouraged scientific research, appointed him lecturer in medicine at the University of Ferrara. In Ferrara, Amatus taught and worked with the famous anatomist Canano, dissecting corpses. In 1547 Amatus left Ferrara and moved to Ancona where he openly professed his

Judaism and, in 1549, published his first *centuria*, a collection of 100 medical case histories, their treatment and results. In 1553 Amatus published *In Dioscoridis enarrationes*, a commentary on Dioscorides's work, in which he notes several mistakes in Matthioli's commentary on



Title page of *Index Dioscorides* by Amatus Lusitanus, Venice, 1536
The Jewish National and University Library, Jerusalem

Dioscorides. Matthioli was a famous botanist and the influential court physician in Vienna. In 1555 when Pope Paul IV was elected, new decrees against Marranos were published in the Papal Provinces and Marrano physicians were forbidden to treat Christian patients. Amatus's home was looted together with his library and manuscripts. It is believed that Matthioli was largely responsible for this, judging from what he wrote in his *Apologia*, in response to Amatus's criticism:

For as you now pretend to adhere to our faith (so I learn), and then give yourself over to Jewish laws and superstitions and thus insult not only your fellow beings, but also God, the Almighty, it is not to be wondered at that you are false even to yourself and are losing your mind. Just as there is no faith and no religion within you, so in truth you are completely blind as to medical art which you unworthily profess. That explains to my view that you are not only a burden and an object of disgust to yourself alone but to others; and that driven by wild furies you have brought it about that you neither enlighten others nor yourself in medical science. just as you are blind in your heresy to divine truth. Thus, according to one of the most prominent physicians of the time, Amatus was unable to see truth in medical science because he was a Jew.

Amatus Lusitanus
(Joao Rodrigues de Castelo Branco),
1511–1568

Forced to flee Ancona, Amatus reached Pesaro, and in 1556 when the Inquisition reached that city he fled to Ragusa. There he lived for three years completing his *Centuria VI*. In 1558 Amatus moved to Salonica where many Jews and Marranos lived openly under the protection of the Sultan, and in 1559 he completed his seventh and last *centuria*. In the seven *centuriae* composed between 1549 and 1559, one of which was dedicated to Joseph Nasi and others to high church officials, Amatus discoursed on 700 medical cases and, *inter alia*, on anatomy, internal medicine, dermatology and mental illness. Amatus was a learned physician, a brilliant clinician and an independent investigator. He did pioneering work in pathological anatomy and medical botany. From the point of view of Jewish history Amatus's life exemplifies the internal struggle and emotional burden to which Marranos were subjected. Despite the necessity of concealing his origins, he emphasized in his books, long before his open return to Judaism, his attachment to Jewish values. In one of his *centuriae*, he quotes the opinions of Maimonides, with no particular relevance to the context. In his description of the treatment of Azaria de Rossi, who was apparently suffering from a gastric ulcer, Amatus described the customs and eating habits of the Jews. Amatus expresses the tra-

ditional concern of medieval Jewish physicians with medical ethics in the oath printed at the end of his sixth and seventh *centuriae*, which follows in abbreviated form:

I swear by God the Almighty and Eternal [and by his most holy Ten Commandments given on Mount Sinai by Moses the lawgiver after the people of Israel had been freed from the bondage of Egypt], that I have never in my medical practice departed from what has been handed down in good faith to us and posterity; that I have never practiced deception, I have never overstated or made changes for the sake of financial gain; I have not been desirous of the remuneration for medical services and have treated many without accepting any fee, but nonetheless with care. I have often unselfishly and firmly refused remuneration that was offered, preferring through diligent care to restore the patient to health, to being enriched by his generosity. [I have given my services in equal manner to all, to Hebrews, Christians and Muslims.] Loftiness of station has never influenced me and I have accorded the same care to the poor as to those of exalted rank. I have never produced disease. In stating my opinion, I have always told what I believed to be true. I have favored no druggist unless he excelled others in skill in his art and in character. In prescribing drugs I have exercised moderation guided by the physical condition of the invalid. I have never revealed a secret entrusted to me. I have never given a fatal draught. No woman has ever brought about an abortion with my aid. In short, I have done nothing which might be considered unbecoming an honorable and distinguished physician. I have been diligent and have allowed nothing to divert me from the study of good authors. The many students who have come to me have all been regarded as though they were my sons; I have used my best efforts to instruct them and to urge them to good conduct. I have published my medical works not to satisfy ambition, but that I might, in some measure, contribute to the furtherance of the health of mankind; I leave to others the judgment of whether I have succeeded; such at least has always been my aim and ever had the foremost place in my prayers.

The oath, written after his return to Judaism, is one of the most exalted literary documents in medical ethics. In the first part, Amatus strongly reaffirms his Jewish faith, dealing both with the ethical aspects and with the duties of the physician towards his patient. Amatus emphasizes the philanthropic aspect of the art of healing, differing in this from the professional materialism of the Hippocratic oath. The second part of the oath reaffirms the principles of the Hippocratic oath, that is, trying to be an excellent physician by giving the right treatment, and by being a diligent student and a good teacher. The oath ends by emphasizing the importance of medical research. It is believed that Amatus died in 1568 fighting the plague in Salonica.



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JACOB BEN ISAAC ZAHALON

Jacob ben Isaac Zahalon was born in Rome in 1630 to a family of distinguished rabbis and scholars, which settled in Italy after their expulsion from Spain. Jacob received a traditional education in Hebrew literature and a medical education at the University of Rome. He soon acquired a fine reputation both as physician and Talmudist in Ferrara, continuing the tradition of rabbi-physician. Zahalon was a prolific writer, best known for his Otzar ha-chayyim [The treasure of life], published in Venice in 1683 as the third part of a larger work, Otzar ha-chochmot [The treasure of wisdom]. The book is encyclopedic in character, including the accepted cures of the day, and Zahalon felt that it could serve as a manual:

In some towns there are no physicians, but there is a scholar who is able to understand and to study closely and to seek cures for the sick in this book.... I have only given the most proper, accepted and well tried method of cure.

The book is divided into thirteen parts beginning with general hygiene and ending with mental disease, covering practically every branch of medicine. A recent publication describes Zahalon's recognition of ailments with other than somatic origins: His discussion of the treatment of "love-sickness" sounds like modern psychoanalytic literature: *"This disease is recognized by the sinking of the eyes, and weeping-like voice without tears. The patient's lids droop and are shaky, and his pulse is rapid, like one who is troubled a great deal. His mental state is changed, although he appears well otherwise." As for treatment, it varies as follows: (1) to obtain the desired object; (2) to let him think of some fault of his sweetheart; (3) let him indulge in other, higher interests; (4) let him change his place of residence and go to a large city where they will not meet; (5) bloodletting as a last resort. His first suggestion is obvious; his second we now call rationalization; and his third sublimation.*

His description of the plague is of particular interest. In 5416 (1656), a disease called morbilli [measles, ed.] broke out among the children; most of them died. Afterwards adults became ill with blotches called petechiae, and in three days they were dead. It appeared three months earlier among the Gentiles than among the Jews. It also came to an end earlier among the Gentiles. The Jews were forbidden to leave the Ghetto and enter the city, as was their custom. Two officers were sent to the Ghetto to prepare a suitable "Lazaretto," where the sick could be placed so that they were separated from the healthy and thus prevent the spread of the epidemic. *This was the procedure. The Jewish physician visited the sick and if he saw any sign of the disease, a black "carbuncle" or a bubo in the groin with fever or other serious symptoms, especially if the tongue was white as snow, he would call the Gentile physician to examine the patient, the latter would order that they*

take the patient and his bed to the Lazaretto to Samuel Gabbai [a physician, ed.], or the patient might remain home and be treated there. When the physician visited the sick it was customary that he take in his hand a large torch of tar, burning it night and day to purify the air for his protection [it acted as an insect repellent, ed.], and in his mouth he had theriac [an antidote to poison, ed.]. In the nine months during which this epidemic lasted, there died, both young and old, about 800; among them a young scholar, expert in the science of surgery, Isaac Zahalon, my father's brother's son of blessed memory. They brought the dead to the river in small boats and carried the bodies to the cemetery outside the city to a place called Piano dei Devisori. Since the people were not able to go to synagogue, on Sabbath Toledoth (Kislev 2, 5417), I, Jacob Zahalon, preached in Catalen Street, from the window in the corner house of David Catigno, to the people (may God preserve them!), standing in the street. At another time I preached in Toscana Street, from the window of the house of Judah Catigno (of blessed memory), to the people standing in the street to listen to the sermon. In other streets scholars would preach from the windows of their houses.

After nine months, the Holy One (blessed be He) remembered His people because of the merit of their forefathers, and the diseases came to an end. In the introduction to his book Zahalon stresses the ethical side of medical practice, giving practical advice to physicians by enumerating the 77 aphorisms of medical conduct published by Zacutus Lusitanus (Abraham Zacuto, see below). His main ethical work, however, the "Physician's Prayer" is contained in Sefer Margaliyyot Tovot, printed in Venice in 1665. From the prayer, it is clear that Zahalon looked upon medicine as a sacred calling. The physician is merely God's servant on earth, put there to help his fellow men. Zahalon's prayer attempts to show God's presence in all medical therapy and research. The physician merely treats and God cures. Thus he prays to God to enable him to know the peculiar curative powers that he placed in "herbs and minerals, in seeds and flowers, in living organisms." While Zahalon's prayer also deals with the humanistic ethical issues his anxieties and concerns

are as relevant today as they were in his day. He prays for "knowledge and insight" and for the "family not to accuse and suspect me of being the cause of death."

ABRAHAM ZACUTO

Abraham Zacuto was the central figure among Jewish doctors in the 17th century just as Amatus was in the 16th century. His life story, like that of Amatus Lusitanus or Judah Abravanel, is another example of a brilliant ethical thinker, working and writing against a background of exile and despair. Abraham Zacuto, who was born in 1576 to a Marrano family in Lisbon, was the great-grandson of Abraham Zacuto, the renowned astronomer and physician, inventor of the astrolabe and the inspiration for Vasco da Gama and, perhaps, for Columbus.



Title page of Otzar ha-Chayyim by Jacob ben Isaac Zahalon. Venice, 1683



Zacutus Lusitanus
(Abraham Zacuto,
1575–1642).

He studied medicine in Salamanca and Coimbra, returned to Lisbon and practiced medicine there for 30 years. In 1624 Zacuto fled to Amsterdam and joined the Jewish community. While in Lisbon he did not publish a single book, whereas in Amsterdam he became an extremely prolific writer. Zacuto was the author of the highly popular *De Medicorum Principum Historia*, (twelve volumes). His other publications were also of significance and popular in his time. His most important essays were collected in *Opera Omnia* (two volumes) and published after his death (in the 1640s) at Lyon. This remarkable work went through five editions and was extensively quoted by medical authors for many years. Although the work was written in Latin and addressed to a Christian audience, in the introduction he emphasizes his Jewish origin:

If my style will seem to you unpolished, do not be astonished for I am a Jew and a stranger who fled from Portugal and my beloved and most lovely birthplace, Lisbon, tossed about hither and thither by severe misfortune and the storms of a long life. I have allowed no day to pass without writing a line in which I showed my love for the Republic of Medicine.

Zacuto was true to the spirit of the Renaissance. He was a good physician and humanist. In his *De Medicorum Principum Historia*, he outlined eighty aphorisms of medical conduct and his code of medical ethics is still valuable today. To give just a few examples:

He shall not be envious.

He shall possess few and good medical reference books.

He shall cultivate the habit of discussing and consulting about his patients with other physicians.

He shall not take upon himself to cure those who are beyond his skill.

In dispensing medication let him start with milder ones.

Let him always help nature, for that is the primary factor in health.

The life, work and ethics of the three physicians chosen for this essay express certain universal and inspirational truths for physicians for all times. Their experiences, travels and moral commitments transcend and epitomize the Jewish diaspora experience. Even when faced with persecution, adversity and oppression, as demonstrated by these three figures, we see that Jewish physicians were able to elevate mankind and the Jewish people to superior levels of moral and ethical scientific thinking.

Bibliography

Encyclopedia Judaica, Jerusalem, Keter Publishing House, 1972, vol. 1, p. 797; vol. 16, p. 919.

FRIEDENWALD, HARRY, .M.D., *The Jews and Medicine, Essays*, Baltimore, Johns Hopkins University Press, 1944, p. 340.

GRAYZEL SOLOMON, *A History of the Jews*, Philadelphia, Jewish Publication Society of America, 1969.

LEVINSON, ABRAHAM, M.D., "Jewish Physicians of the Middle Ages," *Medical Leaves*, 1937, pp. 101-113.

ROTH, CECIL, *Dona Gracia of the House of Nasi*, Philadelphia, Jewish Publication Society of America, 1977.

SACHAR, HOWARD M., *Farewell España*, *The World of Sephardim Remembered*, New York, Alfred A. Knopf, 1994.

SAVITZ, HARRY A. M.D., *Profiles of Erudite Jewish Physicians and Scholars*, Chicago, Spertus College of Judaica Press, 1973.

LUSITANUS, AMATUS, *Centuria VI*, Venice, Valgrisius, 1560; translation in Friedenwald, *The Jews and Medicine*.

MATTHIOLI, *Apologia*, 1558, translation in Friedenwald, *The Jews and Medicine*.

ZACUTUS, ABRAHAM, *Opera Omnia*, 1642, translated in Friedenwald, *The Jews and Medicine*.

ZAHALON, JACOB, *Otzar ha-chayyim*, Venice, 1683, translations in Friedenwald, *The Jews and Medicine*, and Savitz, *Profiles*.

ZAHALON, JACOB, *Sepher Margaliyyot Tobot*, Venice, 1665; translation in Savitz, *Profiles*.