

History

Maimonides and the chemotherapy of infectious diseases

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Eight hundred years have gone by since the death of Maimonides, an extraordinary Jewish Spanish physician, better known for his religious and philosophical ideas than for his contributions to medicine. Nevertheless, his extensive medical treatises were of great importance and still have relevance to physicians today.

Moses Maimonides (1135–1204) was the greatest Jewish thinker of the Middle Ages, as well as the leading physician in his era. This review of his life and achievements provides insight into the world of a remarkable 12th-century physician.

Maimonides' medical writings confirm his knowledge of Greek and Persian, as well as contemporary medieval medicine. His descriptions of many diseases such as hepatitis, pneumonia and many others are remarkably modern, in spite of being written during the Middle Ages.

Islam's ascendancy during the Middle Ages extended to Western Europe, and Spain came under its rule in the 8th century. Islamic hold over the Spanish citizenry, one fifth of whom were Jews, led to cultural and intellectual growth, with Jews, Muslims and Christians living more or less in peaceful coexistence in the Spanish town of Cordova.

Despite this positive intellectual and cultural climate, the 12th-century world of Maimonides was a harsh one. Infant

and childhood mortality were startlingly high; more than half of the population died before reaching 10 years of age, most commonly due to infectious diseases. The great bubonic plague epidemic was still more than 100 years in the future. Even for those who survived to adulthood, life expectancy was limited; those who lived to 60 years of age were considered quite fortunate.

The Diaspora of the Jews spurred their travel throughout Europe and Northern Africa in search of prosperity. Many families, including Maimonides' ancestors, wandered to the Iberian Peninsula.

While the Jews of Christian Europe and the Muslim Middle East were oppressed minorities, the Jews of southern Spain constituted, at least from the 8th through the 12th centuries, a thriving community. During this golden era of Jewish history, religious and academic freedom was the rule, and culture flourished in Moorish Spain. The city of Cordova was the heart of Spanish intellectual life, a rich cultural center to which scholars and artists flocked.

It is unknown exactly when the first Jews settled on the Iberian Peninsula, but we do know that Maimonides' family had been in Cordova for several generations by the time of his birth. His father was a distinguished scholar and judge in the community.

Maimonides was born in Cordova into a rabbinical family on March 30, 1135, on the eve of Passover, at a time when about one fifth of the people in southern Spain were Jews. He was named Moses, son of Maimon, but he is known to the secular world by his Greek name Maimonides (the suffix “-ides” means “son of”). The Maimon family traced its lineage directly back to King David, who united the people of Israel in 1004 B.C. Rabbi and royal physician, Maimonides was the most illustrious figure of Judaism in the post-Talmudic era (1).

In 1148, while Maimonides was still a boy, disaster struck the Jews of Spain: a fanatic Muslim sect known as the Almohades destroyed the Jewish community and its synagogues and compelled the Christians and Jews to convert to Islam or face exile. Maimonides' family wandered through southern Spain and northern Africa for the next 12 years and finally settled in Fez, Morocco, in 1160. By that time, Maimonides was 25 years old.

In Morocco Maimonides began to study medicine, probably primarily through self-directed reading of ancient Greek authors in Arabic translations (2). He must have been an avid reader, since his medical writings show a profound knowledge of ancient Greek authors in Arabic translation, as well as of Muslim medical texts. Hippocrates, Galen and Aristotle were some of his Greek medical inspirations, while Rhazes of Persia, al-Farabi and Ibn Zuhr, the Spanish-Arabic physician, were some of the Muslim authors frequently cited by Maimonides (3).

Unfortunately, Fez proved to be no safer than Cordova. In 1165, the family was again forced to flee, purportedly to seek religious freedom in Accho in the Land of Israel. However, disillusioned in this land of dreams, the family stayed for only a few months during which time they made a tour of the Holy Land that included Jerusalem and the Cave of the Machpelah in Hebron. In 1166 they again set out in search of a home, this time in Egypt. After a short stay in Alexandria, they took up residence in Fostat (Cairo). For the next eight years, Maimonides lived a carefree life, supported by his brother David.

At the age of 30 years, Maimonides remarried; his first wife had died young. He took as his second wife a woman from a distinguished Egyptian family, the sister of Ibn Almali, one of the royal secretaries, who himself married Maimonides' only sister. With his second wife he had his only son Abraham.

When Maimonides was nearly 40 years of age, his father died and his brother David was killed in a shipwreck. Thus, at a late age, Maimonides decided to make the medical profession his livelihood. His brother-in-law recognized

him as a gifted clinician and assigned him the role of court physician to Vizier al-Fadil, regent of Egypt during the absence of the sultan, Saladin the Great, who was fighting in the Crusades in Palestine. It was at this time that Richard the Lion-Hearted, also fighting in the Crusades, was reported to have invited Maimonides to become his personal physician, an offer that he declined. Meanwhile, his reputation as a physician continued to grow in Egypt and in neighboring countries (4) but nevertheless he still found time for medical scholarship. In 1193, Saladin died and his eldest son, al-Afdal Nur al-Din Ali, succeeded him. As a result, Maimonides' medical duties became even heavier.

Maimonides disapproved of the use of charms and amulets, denounced the practices of charlatans and quacks, and taught his students to always treat the patient as a whole person. His description of a typical day, written in a letter to his friend and fellow-rabbi Samuel ibn Tibbon, shows that he was very busy in his dual role as rabbi and doctor. To him medicine, religion and philosophy were components of the unified conception.

As a physician, Maimonides was a strict rationalist, producing numerous treatises that were translated from the Arabic into Hebrew and Latin, and helped spread his fame to the West.

Maimonides had a positive approach to health, viewing it as a definitive good, not merely the absence of disease. He was a general practitioner, physician and surgeon, as well as a public health officer. His 10 medical treatises constitute an encyclopedia of the medicine and surgery of his time (Table 1).

The first of Maimonides' medical writings is called *Extracts from Galen or the Art of the Cure* (5). The second is the *Commentary on the Aphorisms of Hippocrates* (6). The third of Maimonides' medical texts, the most voluminous of all, is *The Medical Aphorisms of Moses Maimonides*. This book comprises 1500 aphorisms and is based mainly

Table 1. Maimonides' medical treatises

1. Extracts from Galen or the Art of Cure
2. Commentary on the Aphorisms of Hippocrates
3. The Medical Aphorisms of Maimonides'
4. Treatise on Hemorrhoids
5. Treatise on Co-habitation
6. Treatise on Asthma
7. Treatise on Poisons and their Antidotes
8. Regimen of Health
9. Discourse on the Explanation of Fits
10. Glossary of Drug Names

on Greco-Persian medical writers and organized into 25 chapters, each dealing with a different area of medicine (7).

Maimonides described the signs and symptoms of pneumonia with remarkable accuracy. The basic symptoms which are always present in pneumonia are as follows: acute fever, sticking pain in the side, short rapid breaths, serrated pulse and cough, generally with sputum.

His description of hepatitis demonstrates similar clarity and completeness. According to Maimonides' text, liver inflammation exhibits the following eight signs: "high fever, thirst, complete anorexia, a tongue which is initially red then turns black, biliary vomitus, initially yellow egg yolk in color which later turns dark green, pain on the right side which ascends up to the clavicle... Occasionally a mild cough may occur and a sensation of heaviness which is first felt on the right side and then spreads widely."

The tenth chapter of Maimonides' *Medical Aphorisms* is devoted entirely to fevers. Maimonides recognized that fever is only a symptom, not a disease, and that treatment should be directed towards both the symptom and the underlying cause, once it has been identified. According to him, "It is important to know the precise differentiation between the fever of a septic process and the cause for that septic process. It is important to know which remedy to use to treat a fever, which therapy to employ to treat a septic process and which medicine to use to treat the cause for the septic process...." There is a clear separation of fevers into tertian, quotidian and quartan varieties, although the causes given for them are incorrect according to modern medical thought. To describe the three types of fevers, Maimonides quotes Galen as follows: "Intermittent fevers which cease during specific intervals are of three types and these are: tertian fever, that which comes daily called permanent or quotidian, and quartan fever. Tertian fever occurs from red bile, which putrefies. Quotidian fever is produced from black bile, which begins to decay, and are of the white type. Quartan fever develops as a result of the deterioration of black bile."

Various features of the three types of fever are then described. Much faith is placed in theriac as a therapeutic drink for quartan fevers, preceded by the consumption of absinthium juice. Phlebotomy is recommended for chronic fevers.

In his *Medical Aphorisms*, Maimonides also gave a perceptive description of trachoma, choroiditis, blepharitis and lachrymal abscesses, as well as tonsillar abscesses, croup and diphtheria (Tables 2 and 3).

The fourth of Maimonides' medical writings is his *Treatise on Hemorrhoids* (8). The fifth work is his *Treatise on*

Table 2. Infectious diseases described by Maimonides in his treatises.

Abscess	Corrosive exanthema	Gangrene
Blepharitis	Coryza	Hepatitis
Carbuncle	Diarrhea	Laryngopharyngitis
Catarrhs	Dysentery	Leprosy
Conjunctivitis	Favus	Pneumonia
Constipation	Furuncle	Phthisis

Table 3. Symptoms of infectious diseases described by Maimonides.

Exanthemas	Pus
Expectorations	Putrefaction
Fevers	Sepsis
Hemoptysis	

Co-habitation, written for the nephew of Saladin, the Sultan al-Muzaffar Umar ibn Nur Al-Din (8). The sixth medical text written by Moses Maimonides is his *Treatise on Asthma* (9, 10). His seventh medical manuscript is his *Treatise on Poisons and Their Antidotes* (8). His eighth book is *Regimen of Health (Regimen Sanitatis)*, which Maimonides wrote in 1198 during the first year of the reign of Sultan al-Malik al-Afdal, eldest son of Saladin the Great (11). The ninth of Maimonides' medical writings is his *Discourse on the Explanation of Fits*.

His tenth and final medical book is his *Glossary of Drug Names* (12), a text inspired in a wide variety of medical traditions. The influence of the Arabic medical tradition, for example, can be seen in references to works by Ibn Yulyul, Abul Walid ben Yanah, Ibn Wafid, Al Gafiqi and Ibn Samyun. He also borrows from Greco-Roman sources, represented mostly by Dioscorides and Galen. Indian medicine, as transmitted by Susruta and Characa, is also included, as are medical discoveries from Syria, Persia and Egypt. This information, drawn from such an extensive number of sources, forms a body of medical knowledge which influences and supports Maimonides' pharmacologic and chemotherapeutic ideas. His approach to chemotherapy ranges from hygiene on the one hand to surgery on the other. The drugs from the three kingdoms of nature mentioned in this text include both simples and compounds, with 1800 different names given for simple drugs alone. As with all his other books on medicine, his *Glossary of Drug Names* was written during his time in Egypt.

Table 4. Chemotherapeutic agents cited by Maimonides.

<i>Abrotanum</i>	<i>Capparis spinosa</i>	<i>Dorema ammoniacum</i>	<i>Jasminum officinale</i>
<i>Acacia arabica</i>	<i>Cardamine hirsuta</i>	<i>Doronicum pardalianches</i>	<i>Jiniperus sabina</i>
<i>Acacia farnesiana</i>	<i>Carthamus tinctorius</i>	<i>Dracaena boerhavi</i>	<i>Jumperus oxycedrus</i>
<i>Acetum scillae</i>	<i>Carum carvi</i>	<i>Dracaena cinnabari</i>	<i>Krapp</i>
<i>Acorus calamus</i>	<i>Carum copticum</i>	<i>Dracontium</i>	<i>Kynos batos</i>
<i>Adiantum</i>	<i>Cassia acutifolia</i>	<i>Dried juice</i>	<i>Lactagogues</i>
<i>Aegytiacum</i>	<i>Cassia caryophyllata</i>	<i>Ecballium elaterium</i>	<i>Lactuca sativa</i>
<i>Agaricon</i>	<i>Cassia fistula</i>	<i>Elecampane</i>	<i>Lagoecia cuminoides</i>
<i>Alant</i>	<i>Cassia lignea</i>	<i>Elettaria cardamonum</i>	<i>Lapis divinus</i>
<i>Albersia blithum</i>	<i>Cassia tora</i>	<i>Eruca sativa</i>	<i>Lapis judaicus</i>
<i>Alisma plantago</i>	<i>Cauliflower soup</i>	<i>Eryngium campestre</i>	<i>Lapis lazuli</i>
<i>Aloe officinalis</i>	<i>Cedrus libani</i>	<i>Eugenia caryophyllata</i>	<i>Lathyrus sativus</i>
<i>Aloe succatrina</i>	<i>Centaurea behen</i>	<i>Euphorbia resinifera</i>	<i>Laurus nobilis</i>
<i>Alpina galanga</i>	<i>Centaureum erytharea</i>	<i>Euzomon</i>	<i>Lavendula stoechas</i>
<i>Alpina officinarum</i>	<i>Cerasus mahaleb</i>	<i>Ewpithymum murr</i>	<i>Lead carbonate</i>
<i>Althaea officinalis</i>	<i>Ceylonicum</i>	<i>Faba vulgaris</i>	<i>Lead oxide</i>
<i>Allium porrum</i>	<i>Cicer arietenum</i>	<i>Fel ursi</i>	<i>Lean milk</i>
<i>Allium sativum</i>	<i>Cicjorium endivia</i>	<i>Fel tauris</i>	<i>Lecanora affinis</i>
<i>Amygdalis dulcis</i>	<i>Cidaris glandiferus</i>	<i>Ferula asa foetida</i>	<i>Lecanora esculenta</i>
<i>Anacyclus pyrethrum</i>	<i>Cinamomum aromaticum</i>	<i>Ferula galbaniflua</i>	<i>Lemna minor</i>
<i>Andropogon schoenanthus</i>	<i>Cinnamomum cassia</i>	<i>Ferula marmarica</i>	<i>Lepidium sativum</i>
<i>Anethum graveolens</i>	<i>Cinnamomum camphora</i>	<i>Ferula scowitziana</i>	<i>Levandula spica</i>
<i>Apium graveolens</i>	<i>Cistus creticus</i>	<i>Ferula tingitana</i>	<i>Lichen</i>
<i>Aquilaria agallocha</i>	<i>Citrullus colocynthis</i>	<i>Ficus carica</i>	<i>Ligna aloe</i>
<i>Argentum</i>	<i>Citrullus vulgaris</i>	<i>Foeniculum vulgare</i>	<i>Ligna bovis</i>
<i>Aristolochia clematis</i>	<i>Citrus medica</i>	<i>Foenum graecum</i>	<i>Lilium candidum</i>
<i>Arnoglosson</i>	<i>Clycyrrhiza glabra</i>	<i>Fraxinus exelsior</i>	<i>Lingua avis</i>
<i>Arsenic xides</i>	<i>Coccus lacca</i>	<i>Fumaria officinalis</i>	<i>Lingua bovina</i>
<i>Artemisia absinthium</i>	<i>Commiphora africanum</i>	<i>Fungi varii</i>	<i>Linum usitatissimum</i>
<i>Artemisia arborescens</i>	<i>Commiphora opobalsamum</i>	<i>Gentiana lutea</i>	<i>Liquidamber orientalis</i>
<i>Artemisia judaica</i>	<i>Convolvulus turpethum</i>	<i>Glaucium comiculatum</i>	<i>Lithotrypties</i>
<i>Asarum europeum</i>	<i>Convolvulus scammonia</i>	<i>Glossostemon brugurieri</i>	<i>Lotus</i>
<i>Asparagus officinalis</i>	<i>Copper alloy</i>	<i>Haematites lithos</i>	<i>Lpidium latifolium</i>
<i>Asphodelus ramosus</i>	<i>Corchorus olitorius</i>	<i>Haloxylon articulatum</i>	<i>Lupinus albus</i>
<i>Astragalus creticus</i>	<i>Cordia myxa</i>	<i>Hamamelidacea</i>	<i>Lycium afrum</i>
<i>Astragalus sarcocolla</i>	<i>Coriandrum sativum</i>	<i>Hedera helix</i>	<i>Lycium europeum</i>
<i>Atriplex hortensis</i>	<i>Costus</i>	<i>Helleborus albus et niger</i>	<i>Macis</i>
<i>Aubergine</i>	<i>Crataegus</i>	<i>Hemostypicum</i>	<i>Malus communis</i>
<i>Balanos myrepsike</i>	<i>Crocus sativus</i>	<i>Herba pedicularis</i>	<i>Malva visco</i>
<i>Balsamodendron</i>	<i>Cucumis melo</i>	<i>Herba pulicaria</i>	<i>Mandragora autumnalis</i>
<i>Bedellium africanum</i>	<i>Cucumis sativus</i>	<i>Honey</i>	<i>Mandragora officinarum</i>
<i>Bedolach habakar</i>	<i>Cucurbita pepo</i>	<i>Hordeum coeleste</i>	<i>Maritima</i>
<i>Berberis vulgaris</i>	<i>Cuscuta epithymum</i>	<i>Hordeum vulgare</i>	<i>Marrubium vulgare</i>
<i>Beta vulgaris</i>	<i>Cutter</i>	<i>Hyoscyamus niger</i>	<i>Mastix</i>
<i>Bitumen</i>	<i>Cypeius</i>	<i>Hypericum perforatum</i>	<i>Matricaria chamomilla</i>
<i>Borrigo officinalis</i>	<i>Cyperus esculentus</i>	<i>Hyphaena thebiaca</i>	<i>Melilotus officinalis</i>
<i>Boswellia charteri</i>	<i>Cheiranthus cheiri</i>	<i>Hyssopus offininalis</i>	<i>Melissa officinalis</i>
<i>Botrytis</i>	<i>Chelidoneum dodecandrum</i>	<i>Infectoria</i>	<i>Mentastrum</i>
<i>Brassica oleracea</i>	<i>Chelidoneum glaucum</i>	<i>Inula conyzae</i>	<i>Mentha oioeritia</i>
<i>Butea frondosa</i>	<i>Chelidonium majus</i>	<i>Inule helenium</i>	<i>Mentha rotundifolia</i>
<i>Cakile maritima</i>	<i>Daphne mezereum</i>	<i>Ipomoca hederacea</i>	<i>Mentha sativa</i>
<i>Calamus aromaticus</i>	<i>Daucus carota</i>	<i>Ipomoea turpethum</i>	<i>Mespilus azarolus</i>
<i>Callotropis procera</i>	<i>Doichos lubia</i>	<i>Iraki musk</i>	<i>Meum athamanticum</i>
<i>Cannabis sativa</i>	<i>Dolichos labab</i>	<i>Iris florentina</i>	<i>Molluse</i>
<i>Capillus veneris</i>			<i>Moringa pterygosperma</i>
			<i>Morus</i>

Table 4. Chemotherapeutic agents cited by Maimonides (continued).

<i>Musa sepientum</i>	<i>Pirus communis</i>	<i>Rotundifolia</i>	<i>Terminalia bellerica</i>
<i>Musa troglodytarum</i>	<i>Pirus malus</i>	<i>Rubia tinctorum</i>	<i>Terminalia chebula</i>
<i>Myristica fragrans</i>	<i>Pistacia lentiscus</i>	<i>Rubus fruticosus</i>	<i>Terminalia gella</i>
<i>Myrthus communis</i>	<i>Pistacia palaestina</i>	<i>Rumex</i>	<i>Terminalia horrida</i>
<i>Napus esculenta</i>	<i>Pistacia terebinthus</i>	<i>Ruta graveolens</i>	<i>Testiculos castoris</i>
<i>Narcissus poeticus</i>	<i>Pistacia vera</i>	<i>Sacharum officinarum</i>	<i>Teucrium polium</i>
<i>Nargil</i>	<i>Pix bitumen</i>	<i>Salix aegyptiaca</i>	<i>Thapsia garganica</i>
<i>Nasturtium officinale</i>	<i>Plantago</i>	<i>Salix safsaf</i>	Wine
<i>Nigella sativa</i>	<i>Platanus orientalis</i>	<i>Santalum album</i>	Thinness
<i>Nux commestibilis</i>	<i>Plumbago europea</i>	<i>Sativus curcuma</i>	Thorns
<i>Nux muscata</i>	<i>Plyganum aviculares</i>	<i>Satureai hortensi</i>	<i>Thymus glaber</i>
<i>Nux vomica</i>	<i>Polypodium vulgare</i>	<i>Scirrhous</i>	<i>Thymus sepyllum</i>
<i>Nymphaea caerulea</i>	<i>Polyporus officinalis</i>	<i>Scokopendrium vulgare</i>	<i>Tragopogon pratensis</i>
<i>Ocimum basilicum</i>	<i>Pomum</i>	<i>Semen lini usitatissimi</i>	<i>Tribulus terrestris</i>
Onion	<i>Portuclaca oleracea</i>	<i>Semicarpus anacardium</i>	<i>Trigonella caerulea</i>
<i>Onopordon acanthium</i>	<i>Potio regia</i>	<i>Sepervivum arboreum</i>	<i>Triticum spelta</i>
<i>Operculina turpethum</i>	Pressed cheese	<i>Serpyllum sisimbrium</i>	<i>Triticum vulgare</i>
<i>Opopanax chironium</i>	<i>Pretosilenum</i>	<i>Sesamun orientale</i>	<i>Triticum turgidum</i>
<i>Or vumin</i>	<i>Prunus amygdala</i>	<i>Seseli tortuosum</i>	<i>Urtica urens</i>
<i>Oryza sativa</i>	<i>Prunus armeniaca</i>	<i>Sinapis arvensis</i>	<i>Usnea florida</i>
<i>Ovigerum</i>	<i>Prunus mahaleb</i>	<i>Smaragd</i>	<i>Valeriana celtica</i>
<i>Oxalis</i>	<i>Prunus persica</i>	Soda	<i>Valeriana phu</i>
<i>Oxymel</i>	<i>Pterocarpus santalinus</i>	Sodium	<i>Veratrum album</i>
<i>Paeonia officinalis</i>	<i>Pulicaria undulata kostl</i>	<i>Solanum melongena</i>	<i>Vertde – gris</i>
<i>Panakes cheironecon</i>	<i>Punica granatum</i>	<i>Solanum nigrum</i>	<i>Vicia ervilia</i>
<i>Pastinaca sativa</i>	<i>Quercus ilex</i>	<i>Sosvellia carterii</i>	<i>Vicia faba</i>
<i>Pastinaca schekakul</i>	<i>Radix althease</i>	<i>Spica nardi</i>	<i>Viola odorata</i>
<i>Persicon melon</i>	<i>Radix rubi fruticosi</i>	<i>Spina christi</i>	<i>Virga pastoris</i>
<i>Phaseolus mungo</i>	<i>Raphanus sativus</i>	<i>Spinacea oleracea</i>	<i>Vitis vinifera</i>
<i>Phaseolus tuberosus</i>	<i>Resina lacca</i>	<i>Spongy cassia</i>	Wax plaster
<i>Phoenix dactylifera</i>	<i>Rhammus infectorius</i>	<i>Startice limonium</i>	Weasel
<i>Picnomom orientalis</i>	<i>Rheum ribes</i>	<i>Stibium</i>	<i>Zerumbert rose</i>
<i>Pimpinella anisum</i>	<i>Rhus coriaria</i>	<i>Storax officinales</i>	Zinc
<i>Pinus halepensis</i>	<i>Ribes</i>	<i>Strychnos</i>	<i>Zingiber</i>
<i>Pinus pinea</i>	<i>Rosa canina</i>	<i>Styrteria</i>	<i>Zingiber zurumbet</i>
<i>Piper cubeda</i>	<i>Rosa centifolia</i>	<i>Styrax officinale</i>	<i>Zizyphus juyuba</i>
<i>Piper longum</i>	<i>Rosa damascena</i>	<i>Tamarindus indica</i>	<i>Zizyphus sativa</i>
<i>Piper rotundum</i>	<i>Rosa gallica</i>	<i>Tamarix mannifer</i>	
<i>Pirus acerba</i>	<i>Rotrundus</i>	<i>Tamarix orientalis</i>	
		<i>Taxus baccata</i>	

Therapeutic uses for chemotherapeutic drugs are also presented in many of his other medical books. In chapter XXI of his *Medical Aphorisms*, Maimonides collects the names of 310 drugs, 285 from vegetables and 25 from animals or minerals (Table 4).

An Arabic verse circulated at the time said that: “Galen’s medicine is only for the body, but that of Maimonides is for both body and soul.” He was heroic in his equal treatment of both rich and poor. By the year 1200, Maimonides found it impossible to continue making visits, but he still

kept up his medical practice until his death in 1204 at 70 years of age (13).

Maimonides died on the 20th day of the Hebrew month of *Tevet* (December 13, 1204) and was buried in Tiberias. Legend tells that Maimonides’ body was placed upon a donkey and that the animal was set loose. The donkey wandered and wandered until it finally stopped in Tiberias, at the site chosen for the great Maimonides’ burial. His grave is still there today, and pilgrims who visit Israel come to the cemetery in Tiberias to pay homage to his memory (14).

The Christian, Muslim and Jewish worlds all mourned him. As a physician, he treated disease by the scientific (as opposed to the empiric and/or popular) method, not by guesswork, superstition or rule of thumb. His inspiration lives on through the years and his position as one of the medical giants of history is indelibly recorded. He was physician to sultans and princes, and as Sir William Osler said, "He was Prince of Physicians." Indeed, as it once was said, "From [the biblical] Moses to Moses [Maimonides] there never arose a man like Moses," and there has been no one like him since.

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