

Development of Pharmacology (Ilmul Advia) during Abbasid Period and its Relevance to Modern Age



Abbasid Caliphate (green) at its greatest extent, c. 850.

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Published in India by Prowess Publishing, YRK Towers, Thadikara Swamy Koil St, Alandur,
Chennai, Tamil Nadu 600016

ISBN-13: 978-93-89097-30-6
ePUB ISBN: 978-1-5457-4703-2
Mobi ISBN: 978-1-5457-4704-9

Library of Congress Cataloging in Publication

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Chapter 1

Abbasid Dynasty: Islamic Abbasid Caliphate 750–1258 AD

The Golden Age of Islamic Civilization

Abbāsid Dynasty, second of the two great dynasties of the Muslim Empire of the Caliphate, which ruled the Islamic world, oversaw the golden age of Islamic culture. The dynasty ruled the Islamic Caliphate; it overthrew the Umayyad caliphate in 750 AD and resigned as the Abbāsid caliphate until destroyed by the Mongol invasion in 1258 AD (Anonymous, 2015), making it one of the longest and most influential Islamic dynasties. For most of its early history, it was the largest empire in the world, and this meant that it had contact with distant neighbors such as the Chinese and Indians in the East, and the Byzantines in the West, allowing it to adopt and synthesize ideas from these cultures.

The **Abbasid Caliphate** (Arabic: *al-‘Abbāsīyūn*) was the third of the Islamic Caliphates of the Islamic Empire. ‘**Abbasid**’ name is derived from that of the uncle of the Prophet ‘Muḥammad, al-Abbās (died c. 653), of the Hāshimite clan of the Quraysh tribe in Mecca. It was ruled by the Abbasid dynasty of caliphs, who built their capital in Baghdad after overthrowing the Umayyad caliphs from all but Al Andalus. From c. 718, members of his family worked to gain control of the empire, and by skillful propaganda won much support, especially from Shīi Arabs and Persians in Khorāsān. Open revolt in 747, under the leadership of AbūMuslim, led to the defeat of Marwān II, the last Umayyad caliph, at the Battle of the Great Zāb River (750) in Mesopotamia and to the proclamation of the first Abbāsid caliph, Abūal-Abbās as-Saffāḥ.

It was founded by the descendant of the Prophet Muhammad’s youngest uncle, Abbas ibn Abd al-Muttalib. It was created in Harran in 750 C.E. and shifted its capital in 762 C.E from Harran to Baghdad. It flourished for two centuries, but slowly went into decline with the rise to power of the Turkish army it had created, the Mamluks. Within 150 years of gaining power across

Persia, they were forced to cede power to local dynastic amirs who only nominally acknowledged their power, and had to cede Al Andalus to an escaped Umayyad royal and the Maghreb and Ifriqiya to independent entities such as the Aghlabids and the Fatimids.

Their rule was briefly ended for three years in 1258, when Hulagu Khan, the Mongol conqueror, sacked Baghdad, resuming in Egypt in 1261. They continued to claim authority in religious matters from their base in Mamluk Egypt up to 1519 when power was formally transferred to the Ottomans and the capital transferred to Istanbul.

Under the Abbāsids the caliphate entered a new phase; instead of focusing as the Umayyad had done, on the West-on North Africa, the Mediterranean, and southern Europe-the caliphate now turned eastward.

The capital was moved to the new city of Baghdad, and events in Persia and Transoxania were closely watched. For the first time the caliphate was not coterminous with Islam; in Egypt, North Africa, Spain, and elsewhere, local dynasties claimed caliph status. With the rise of the Abbasids the base for influence in the empire became international, emphasizing membership in the community of believers rather than Arab nationality. Since much support for the Abbāsids came from Persian converts, it was natural for the Abbāsids to take over much of the Persian (Sāsānian) tradition of government. Support by pious Muslims likewise led the Abbāsids to acknowledge publicly the embryonic Islāmic law and to profess to base their rule on the religion of Islām. Between 750 and 833 the Abbāsids raised the prestige and power of the empire, promoting commerce, industry, arts, and science, particularly during the reigns of al-Manṣūr, Hārūn ar-Rashīd, and al-Mamūn.

In 1055 the Abbāsids were overpowered by the Seljuqs, who took what temporal power may have been left to the caliph but respected his position as religious leader, restoring the authority of the caliphate, especially during the reigns of al-Mustarshid (1118–35), al-Muqtafī, and an-Nāṣir. Soon after, in 1258, the dynasty fell during a Mongol siege of Baghdad.

LANGUAGE DURING ABBASID PERIOD

Language during that period were Arabic (official), Aramaic, Armenian, Berber languages, Georgian, Greek, Hebrew, Middle Persian, Turkish, Kurdish with Capital at Baghdad. Most common religion during that Dynasty was Sunni Islam and Abbasid Dinar was the currency (Anonymous, 2015).

THE ABBASID REVOLUTION

The Abbasid Dynasty overthrew the preceding Umayyad Dynasty, which was based in Damascus, Syria. The Umayyads had become increasingly unpopular, especially in the eastern territories of the caliphate. The Umayyads favored Syrian Arabs over other Muslims and treated mawali, newly converted Muslims, as second-class citizens. The most numerous group of mawali were the Persians, who lived side-by-side with Arabs in the east who were angry at the favor shown to Syrian Arabs. Together, they were ripe for rebellion. Other Muslims were angry with the Umayyads for turning the caliphate into a hereditary dynasty. Some believed that a single family should not hold power, while Shiites believed that true authority belonged to the family of the Prophet Muhammad through his son-in-law Ali, and the Umayyads were not part of Muhammad's family. All these various groups who were angry with the Umayyads united under the Abbasids, who began a rebellion against the Umayyads in Persia. The Abbasids built a coalition of Persian mawali, Eastern Arabs, and Shiites. The Abbasids were able to gain Shiite support because they claimed descent from Muhammad through Muhammad's uncle Abbas. Their descent from Muhammad was not through Ali, as Shiites would have preferred, but Shiites still considered the Abbasids better than the Umayyads. A Persian general, Abu Muslim, who supported Abbasid claims to power, led the Abbasid armies. His victories allowed the Abbasid leader Abul 'Abbas al-Saffah to enter the Shiite-dominated city of Kufa in 748 and declare himself caliph. In 750, the army of Abu Muslim and al-Saffah faced the Umayyad Caliph Marwan II at the Battle of the Zab near the Tigris River. Marwan II was defeated, fled, and was killed. As-Saffah captured Damascus and slaughtered the remaining members of the Umayyad family (except for one, Abd al-Rahman, who escaped to Spain and continued the Umayyad Dynasty there). The Abbasids were the new rulers of the caliphate.

HISTORICAL BACKGROUND: ABBASID DYNASTY

The Early Abbasids

The Abbasids had led a revolution against the unpopular policies of the Umayyads, but those who expected major change were disappointed. Under the second Abbasid Caliph, al-Mansur (r. 754–775), it became clear that much of the Umayyad past would be continued. The Abbasids maintained the hereditary control of the caliphate, forming a new dynasty. The Abbasids became

champions of Sunni orthodoxy, upholding the authority of their family over that of Ali, and continuing the subjugation of the Shiites. Even Abu Muslim, the brilliant Persian general who engineered the rise of the Abbasids, was deemed a threat and executed. However, the Abbasids did prove loyal to their Persian mawali allies. In fact, Abbasid culture would come to be dominated by the legacy of Persian civilization. The Abbasid court was heavily influenced by Persian customs, and members of the powerful Persian Barmakid family acted as the advisers of the caliphs and rivaled them in wealth and power. One of the earliest, and most important, changes the Abbasids made was to move the capital of the Islamic empire from the old Umayyad power base of Damascus to a new city—Baghdad.

Baghdad was founded in 762 by al-Mansur on the banks of the Tigris River. The city was round in shape, and designed from the beginning to be a great capital and the center of the Islamic world. It was built not far from the old Persian capital of Ctesiphon, and its location reveals the desire of the dynasty to connect itself to Persian culture. Baghdad grew quickly with encouragement from the Abbasid state, and it was soon the largest city in the world. At Baghdad, the Persian culture that the Umayyads had attempted to suppress was now allowed to thrive. Art, poetry, and science flourished. The Abbasids learned from the Chinese (allegedly from Chinese soldiers captured in battle) the art of making paper. Cheap and durable, paper became an important material for spreading literature and knowledge.

POLITICAL AND RULING ISSUES WITH ABBASID DYNASTY

Besides being a great patron of the arts and sciences, Harun al-Rashid also brought the Abbasid Caliphate to its high point. Still, he had to deal with revolts in Persia and North Africa, and he removed from power the Persian Barmakid family, the source of many great advisers (supposedly after the adviser Ja'far impregnated the caliph's sister, though probably because al-Rashid feared their power would eclipse his own). Al-Rashid's son, Caliph al-Ma'mun not only continued his father's patronage by establishing the House of Wisdom, but he made a number of important independent innovations. Al-Ma'mun adopted the radical Mu'tazili theology, which was influenced by Greek philosophy and held that God could be understood through rational inquiry, and that belief and practice should be subject to reason. He established the mihna, an inquisition in which the adherence of scholars and officials to Mu'tazili theology was tested, and they could be imprisoned or even killed if they did not follow the theology.

As a result, al-Ma'mun's reign saw a growing division between the Islamic sovereign and the Islamic people. This division was exacerbated by his creation of an army of Central Asian soldiers loyal only to him. During al-Ma'mun's reign, the provincial governors, called emirs, became increasingly independent. The governor of Persia set up his own dynasty and ruled as a king, though he continued to recognize the Abbasid caliph. This trend of independent governors would continue, causing major problems for the caliphate.

After the caliphate of al-Ma'mun, Abbasid power began to noticeably decline. The cost of running a massive empire and maintaining a large bureaucracy required steady revenues, and as the authority of the caliphate diminished it was able to collect fewer taxes. In order to stabilize the state finances, the caliphs granted tax-farms to governors and military commanders. These governors, with their own troops and revenue bases, soon proved independent-minded and disloyal. The caliph al-Mu'tasim (r. 833–842) furthered the gap between the caliph and his people. Expanding on al-Ma'mun's new army, he created his own military force of slave soldiers called *ghilman* (later known as "Mamluks"). As the elite guard of the caliph, these slaves began acting superior to the people of Baghdad, which inspired anger. Instead of trying to diffuse the situation, al-Mu'tasim simply moved the capital away from Baghdad and settled in Samarra, 60 miles to the north. Away from the bulk of their subjects who lived in Baghdad, the caliphs became insulated from the problems of their empire. Increasingly, the caliph's soldiers controlled Samaria, turning the caliph into little more than a puppet. When a caliph was not pliant, they simply killed him. Al-Muwaffaq, the brother of caliph al-Mu'tamid (r. 870–892), tried to change this. Acting as his brother's regent, he had the caliph move the capital back to Baghdad, and from there al-Muwaffaq guided the caliphate to new prosperity and defeated the Zanj Rebellion, an uprising of African slaves that posed a major threat to the caliphate. And it was due to al-Muwaffaq, that Abbasid power gained a new lease on life.

However, decline began anew under the reign of al-Muqtadir (r. 908–932), who was raised to the throne at the age of thirteen by members of the court who knew they could control him. For al-Muqtadir's long, twenty-five-year reign, he was too weak to do anything but act as a tool of various court factions. Under his caliphate, territory after territory broke free of Abbasid rule. By the end, Abbasid authority extended hardly beyond Baghdad. Al-Muqtadir was eventually killed by city guards after he bankrupted the state to the point where he could not even pay their salaries. Al-Muqtadir's son, al-Radi (r. 934–940) is often considered the last caliph to exercise any real authority. He tried to raise a powerful governor of Iraq who would hold power over all the other independent emirs.

Thus, al-Radi created the title amir al-umara, “emir of emirs,” for the governor of Iraq. This plan backfired, however, because the title effectively invested supreme authority in its holder, leaving the caliph simply as a figurehead. The Shiite Buyids soon took the title and held it as a hereditary position, becoming the de facto rulers of Iraq. From this point on, the Abbasid caliphs became little more than religious figure heads. In the mid-11th century, the Buyids were ousted by the Sunni Seljuq Turks, who conquered Iran, Iraq, Syria, and most of Asia Minor, forming a new and vibrant Islamic Empire. The Seljuqs continued to keep the Abbasid caliph as the titular ruler while exercising true authority over the empire as sultans. The End of the Abbasids When the Seljuq sultanate collapsed in the twelfth century, an opportunity presented itself for Caliph al-Nasir (r. 1180–1225) to attempt to restore Abbasid power in Iraq. His long reign of forty-seven years allowed him ample time to reconquer Mesopotamia and further develop Baghdad as a center of learning. His chief rival was the Sultanate of Khwarezm, which ruled Persia. Supposedly, al-Nasir appealed to the Mongols, an expanding central-Asian nomad empire, for help against Khwarezm. Under al-Nasir’s less competent successors, this backfired disastrously. The Mongols completely overran Khwarezm and then turned their attention to Baghdad. The Mongols seem to have wanted to rule, as the Buyids and Seljuqs before them, by holding real military power but allowing the Abbasid caliph symbolic authority. Caliph al-Mu’tasim (r. 1242–1258), however, refused to acknowledge their authority and offered these non-Muslims only insults and threats. They captured the city in 1258 and sacked it. They trampled the caliph to death, and completely destroyed the city. They killed somewhere between 100,000 and a million people, destroyed all the books of the House of Wisdom and other libraries, burned down all the great monuments of the city, and left Baghdad a smoldering ruin. This marks the end of the Abbasid caliphate of Baghdad, and the abrupt end of the Islamic golden age. The Abbasid line was re-established in 1261, in Egypt. The sultans of Egypt appointed an Abbasid caliph in Cairo, but these Egyptian caliphs were even more symbolic than the late caliphs had been in Baghdad, and were simply used to legitimize the power of the sultans. The authority of these caliphs extended strictly to religious matters. Still, the Egypt-based period of the Abbasid dynasty lasted over 250 years. In 1517, the Ottoman Empire conquered Egypt.

The last Abbasid caliph, al-Mutawakkil III, was forced to surrender all his authority to the Ottoman Sultan Selim I. This was the end of seven-and-a-half centuries of Abbasid history. However, under the Ottoman rulers the caliphate was once again wedded to a powerful Islamic Empire, which exercised true

authority in the Muslim world. The Abbasids came to power in a rebellion against the Umayyads.

Slowly, Abbasid power weakened in the face of independent governors, called the learning of many civilizations was preserved and expanded upon. By the time of Caliph al-Radi (r. 934–940), Abbasid power was mostly limited to emirs, and a military that controlled the caliphs. Baghdad. Al-Radi created the title of Emir of Emirs to check the power of the various independent emirs, but this only diminished the authority of the caliph. The Abbasids became little more than figureheads, until the reign of caliph al-Nasir (r. 1180–1225), who reasserted power. But alas, his successors were not and allowed the Emir of Emirs to become the true ruler of the caliphate. As successful, and the Abbasid Empire was wiped out by the Mongols, who sacked Baghdad. After this, the Abbasid caliphs continued to rule from Cairo as religious figureheads. **The Abbasid line of caliphs ended when Egypt was conquered by the Ottomans, and the caliphate was claimed by the Ottoman sultan.**



Abbasid Caliphate (green) at its greatest extent, c. 850.
Area covering of around 10,000,000 km² (3,861,022 sq. mi.)
And Population of 50,000,000 with sq. density of 5/km² (12.9/sq. mi.)

ISLAMIC GOLDEN AGE

The fifth caliph of the Abbasid dynasty, Harun al-Rashid (r. 786–809), is

remembered as one of history's greatest patrons of the arts and sciences. Under his rule, Baghdad became the world's most important center for science, philosophy, medicine, and education. The massive size of the caliphate meant that it had contact and shared borders with many distant empires, so scholars at Baghdad could collect, translate, and expand upon the knowledge of other civilizations, such as the Egyptians, Persians, Indians, Chinese, Greeks, Romans, and Byzantines. The successors of Harun al-Rashid, especially his son al-Ma'mun (r. 813–833), continued his policies of supporting artists, scientists, and scholars. Al-Ma'mun founded the **Bayt al-Hikma, the House of Wisdom**, in Baghdad. A library, an institute for translators, and in many ways an early form of university, the House of Wisdom hosted Muslim and non-Muslim scholars who sought to translate and gather the cumulative knowledge of human history in one place, and in one language—Arabic. At the House of Wisdom, important ideas from around the world came together. The introduction of Indian numerals, which have become standard in the Islamic and Western worlds, greatly aided in mathematics and scientific discovery. Scholars such as **Al-Kindi** revolutionized mathematics and synthesized Greek philosophy with Islamic thought. **Al-Biruni** and **Abu Nasr Mansur**—among many other scholars—made important contributions to geometry and astronomy. **Al-Khwarizmi**, expanding upon Greek mathematical concepts, developed Algebra.

Ibn al-Haytham made important contributions to the field of optics, and is generally held to have developed the concept of the scientific method. A number of very practical innovations took place, especially in the field of agriculture. Improved methods of irrigation allowed more land to be cultivated, and new types of mills and turbines were used to reduce the need for labor (though slavery was still very common in both the countryside and cities). Crops and farming techniques were adopted from far-flung neighboring cultures. Rice, cotton, and sugar were taken from India, citrus fruits from China, and sorghum from Africa. It was the efforts of Islamic farmers, that these crops eventually made their way to the West. Such Islamic innovation would continue, even as the Abbasid government fell into chaos. A Long and Slow Decline Due to several very capable caliphs and their advisers, the Abbasid Caliphate thrived through the early ninth century, despite the major challenges of ruling a massive and multiethnic empire.

The reigns of Harun al-Rashid (786–809) and his successors fostered an age of great intellectual achievement. In large part, this was the result of the schismatic forces that had undermined the Umayyad regime, which relied on the assertion of the superiority of Arab culture as part of its claim to legitimacy, and the Abbasids' welcoming of support from non-Arab Muslims. It is well

established that the Abbasid caliphs modeled their administration on that of the Sassanids. Harun al-Rashid's son, Al-Ma'mun (whose mother was Persian), is even quoted as saying:

The Persians ruled for a thousand years and did not need us Arabs even for a day. We have been ruling them for one or two centuries and cannot do without them for an hour.

A number of medieval thinkers and scientists living under Islamic rule played a role in transmitting Islamic science to the Christian West. These people greatly contributed to making Aristotle known in Christian Europe. In addition, the period saw the recovery of much of the Alexandrian mathematical, geometric and astronomical knowledge, such as that of Euclid and Claudius Ptolemy. These recovered mathematical methods were later enhanced and developed by other Islamic scholars, notably by Persian scientists Al-Biruni and Abu Nasr Mansur.

Christians (particularly Nestorian Christians) contributed to the Arab Islamic Civilization during the Ummayyads and the Abbasids by **translating works of Greek philosophers to Syriac and afterwards to Arabic.** Nestorians played a prominent role in the formation of Arab culture, with the **Jundishapur school being prominent in the late Sassanid, Umayyad and early Abbasid periods.** Notably, **eight generations of the Nestorian Bukhtishu family served as private doctors to caliphs and sultans between the eighth and eleventh centuries.**

Algebra was significantly developed by Persian scientist Muhammad ibn Mūsā al-Khwārizmī during this time in his landmark text, *Kitab al-Jabr wa-l-Muqabala*, from which the term *algebra* is derived. He is thus considered to be the father of algebra by some,^[54] although the Greek Mathematician Diophantus has also been given this title. The terms algorism and algorithm are derived from the name of al-Khwarizmi, who was also responsible for introducing the Arabic numerals and Hindu-Arabic numeral system beyond the Indian subcontinent.

Ibn al-Haytham (Alhazen) developed an early scientific method in his *Book of Optics* (1021). The most important development of the scientific method was the use of experiments to distinguish between competing scientific theories set within a generally empirical orientation, which began among Muslim scientists. Ibn al-Haytham's empirical proof of the intromission theory of light (that is, that light rays entered the eyes rather than being emitted by them) was particularly important. Alhazen was significant in the history of scientific method, particularly in his approach to experimentation, and has been referred to as the "world's first true scientist".

Medicine in medieval Islam was an area of science that advanced particularly during the Abbasids' reign. During the 9th century, Baghdad contained over 800 doctors, and great discoveries in the understanding of anatomy and diseases were made. **The clinical distinction between measles and smallpox was described during this time.** Famous Persian scientist **Ibn Sina (known to the West as Avicenna)** produced treatises and works that summarized the vast amount of knowledge that scientists had accumulated, and was very influential through his encyclopedias, *The Canon of Medicine* and *The Book of Healing*. The work of him and many others directly influenced the research of European scientists during the Renaissance.

Astronomy in medieval Islam was advanced by Al-Battani, who improved the precision of the measurement of the precession of the Earth's axis. The corrections made to the geocentric model by al-Battani, Averroes, Nasir al-Din al-Tusi, Mo'ayyeduddin Urdi and Ibn al-Shatir were later incorporated into the Copernican heliocentric model.^[57] The astrolabe, though originally developed by the Greeks, was developed further by Islamic astronomers and engineers, and subsequently brought to medieval Europe.

Muslim alchemists influenced medieval European alchemists, particularly the writings attributed to **Jābir ibn Hayyān (Geber)**. A number of chemical processes such as distillation techniques were developed in the Muslim world and then spread to Europe.

It was seen that Abbasid built a coalition of various forces unhappy with the Umayyads, once the Abbasids One thing that distinguished the Abbasids from the Umayyads was their embrace were in power they continued many Umayyad policies. **They moved the capital to a new city**, Baghdad, close to the Under the Abbasids, Baghdad became the largest and most cultured city in the old Persian capital world.

Caliph Harun al-Rashid sponsored art, literature, and science there, and his son al-Ma'mun created the House of Wisdom, where knowledge from around and it was due to these policies, that Abbasids oversaw an Islamic golden age in which the world was translated into Arabic.

LIST OF ABBASID CALIPHS

S. No.	Caliph	AH	AD

Caliphs of the Abbasid Caliphate			
1.	Abu'l Abbas As-Saffah	131–136	750–754
2.	Al-Mansur	136–158	754–775
3.	Al-Mahdi	158–169	775–785
4.	Al-Hadi	169–170	785–786
5.	Harun al-Rashid	170–193	786–809
6.	Al-Amin	193–198	809–813
7.	Al-Ma'mun	198–218	813–833
8.	Al-Mu'tasim	218–227	833–842
9.	Al-Wathiq	227–232	842–847
10.	Al-Mutawakkil	232–247	847–861
11.	Al-Muntasir	247–248	861–862
12.	Al-Musta'in	248–252	862–866
13.	Al-Mu'tazz	252–255	866–869
14.	Al-Muhtadi	255–256	869–870
15.	Al-Mu'tamid	257–279	870–892
16.	Al-Mu'tadid	279–289	892–902
17.	Al-Muktafi	289–295	902–908
18.	Al-Muqtadir	295–320	908–932
19.	Al-Qahir	320–322	932–934
20.	Al-Radi	322–329	934–940
21.	Al-Muttaqi	329–334	940–944
22.	Al-Mustakfi	334–336	944–946

23.	Al-Muti	336–363	946–974
24.	At-Ta’i	363–381	974–991
25.	Al-Qadir	381–422	991–1031
26.	Al-Qa’im	422–468	1031–1075
27.	Al-Muqtadi	468–487	1075–1094
28.	Al-Mustazhir	487–512	1094–1118
29.	Al-Mustarshid	512–530	1118–1135
30.	Ar-Rashid	530–531	1135–1136
31.	Al-Muqtafi	531–555	1136–1160
32.	Al-Mustanjid	555–566	1160–1170
33.	Al-Mustadi	566–576	1170–1180
34.	An-Nasir	576–622	1180–1225
35.	Az-Zahir	622–623	1225–1226
36.	Al-Mustansir	623–640	1226–1242
37.	Al-Musta’sim	640–656	1242–1258
Caliphs of Cairo			
38.	Al-Mustansir	659–660	1261–1262
39.	Al-Hakim I (Cairo)	660–702	1262–1302
40.	Al-Mustakfi I of Cairo	702–741	1302–1340
41.	Al-Wathiq I	741–742	1340–1341
42.	Al-Hakim II	742–753	1341–1352
43.	Al-Mu’tadid I	753–764	1352–1362
44.	Al-Mutawakkil I	764–785	1362–1383

45.	Al-Wathiq II	785–788	1383–1386
46.	Al-Mu'tasim	788–791	1386–1389
47.	Al-Mutawakkil I (restored)	791–809	1389–1406
48.	Al-Musta'in	809–817	1406–1414
49.	Al-Mu'tadid II	817–845	1414–1441
50.	Al-Mustakfi II	845–855	1441–1451
51.	Al-Qa'im	855–859	1451–1455
52.	Al-Mustanjid	859–884	1455–1479
53.	Al-Mutawakkil II	884–902	1479–1497
54.	Al-Mustamsik	902–914	1497–1508
55.	Al-Mutawakkil III	914–923	1508–1517

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