

A CONCISE HISTORY OF ITALIAN INFLUENCES ON TURKISH PHARMACY

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Introduction

The encounter between Italian pharmaceutical knowledge and practices and those of Asia Minor (modern-day Türkiye) marks a significant chapter in the history of pharmacy, deeply influenced by maritime trade and cultural exchanges that intensified from the 14th century onward¹. These interactions were facilitated by trade routes linking Italy's maritime republics with Anatolian port cities, particularly Constantinople (modern-day Istanbul). The transport of medicinal substances and spices not only boosted trade but also spurred vibrant intercultural dialogue². The exchange extended beyond commerce to include scholarly knowledge and medical texts, integrating Renaissance and subsequent medical sciences into the Ottoman medical tradition rooted in Arab-Islamic heritage. This transformation was largely driven by Italian and other European pharmacists, who played critical roles in the Westernization of Ottoman pharmacy³.

During the 19th century, particularly under Sultan Mahmud II's reign, and following the Tanzimat reforms of 1839, which aimed to modernize state institutions including the military, the Ottoman Empire experienced a significant influx of European professionals. This group included a notable number of Italians—ranging from doctors and pharmacists to artists and architects—who introduced innovations that greatly enhanced the Ottoman scientific and cultural landscapes⁴. Italian influence was particularly evident in the fields of medicine and pharmacy, where Italian professionals played critical roles in the Ottoman healthcare system. Their efforts modernized medical practices and institutions, significantly advancing pharmacy in the region⁵.

Despite the profound Italian influence on Ottoman pharmacy, this area of historical interaction is still insufficiently represented in academic literature. The significant contributions of Italian pharmacists, the integration of their pharmaceutical terminology and knowledge, and the translation of pharmaceutical references from Italian into Turkish to-

¹ UNVER A.S., Sur les relations médicales entre la Turquie et l'Italie dans l'histoire de la médecine [On the medical relations between Turkey and Italy in the history of medicine]. *Bulletin de la Faculté de Médecine d'Istanbul*, vol. 18, no. 2, 1955, pp. 517-527.

² TURAN Ş., *Türkiye-İtalya İlişkileri: Selçuklular'dan Bizans'ın Sona Erişine* [Turkey-Italy Relations: From the Seljuks to the End of Byzantium]. vol. 1. Ankara, T.C. Kültür Bakanlığı Yayınları, 2020.

³ BAYLAV N., *Eczacılık Tarihi* [History of Pharmacy]. Istanbul, Yörük Matbaası, 1968.

⁴ DE GASPERIS A., FERRAZZA R., *Gli Italiani di Istanbul: Figure, Comunità e Istituzioni dalle Riforme alla Repubblica, 1839-1923* [The Italians of Istanbul: Figures, Communities, and Institutions from the Reforms to the Republic, 1839-1923]. Istanbul, Fondazione Giovanni Agnelli, 2007.

⁵ UNVER, 1955, *op. cit.*

gether form a rich legacy of cultural and scientific exchange. However, the complete extent and implications of this influence on the development of pharmacy in the Ottoman Empire remain inadequately researched.

Scope and Purpose

This paper aims to bridge the gap in the literature by exploring the Italian influence on Turkish pharmacy through a historical analysis across various periods. Employing a comprehensive research methodology, it includes an archival search and reviews a broad range of sources to deepen understanding of the topic. These sources encompass 16th and 17th-century travel writings, documents from the Turkish Manuscripts Institution and the Turkish Presidential State Archives, as well as Italian pharmaceutical references published in Istanbul. Further sources include photographic albums, biographical records of Italian pharmacists in Turkey, and websites of contemporary Italian pharmaceutical firms operating in Turkey. Integrating these diverse materials, the study presents a nuanced view of the Italian impact on Turkish pharmacy from historical roots to contemporary practices, thereby enhancing our understanding of the cross-cultural exchanges in pharmaceutical practices.

Transformations in Ottoman Pharmacy after the 16th Century

The 16th and 17th centuries marked a significant transformation in the pharmaceutical literature and practices of the Ottoman Empire, signifying a departure from its traditional Arab-Islamic medical roots that had relied on Arabic and Persian texts. Despite the late introduction of the printing press to Ottoman lands in 1727, there was a notable increase in the translation of medical literature into Turkish, particularly from Italian and Latin sources⁶. This reflects a broader cultural and scientific exchange between the Ottoman Empire and Europe during this period. The era, which culminated in a reorganization of medical education in 1825, is referred to by Turkish medical historians as the “period of European acquaintance,” contrasting with the earlier era known as the period of classical Ottoman medicine⁷.

During the classical Ottoman period, the professions of medicine and pharmacy were not distinctly separated, and medical education was conducted in traditional hospitals known as *darüşşifa* (place of health) through a master-apprentice system. Essential drug references for medical practice were written in Arabic, the scientific *lingua franca* of the era, and organized alphabetically in *qarabadhins*, serving as precursors to pharmacopeias⁸. Although Sephardic Jews, migrating from Spain in the late 15th century, brought Andalusian medical knowledge, their influence as court physicians within the Ottoman palace

⁶ UNVER, 1955, *op. cit.*

⁷ KAHYA E., DEMIRHAN-ERDEMİR A., *Medicine in the Ottoman Empire and Other Scientific Developments*. Istanbul, Nobel Tıp Kitabevleri, 1997.

⁸ TEKİNER H., Pharmacy in Turkey: past, present, and future. *Pharmazie*, vol. 69, no. 6, 2014, pp. 477-480.

was limited⁹. In contrast, the period of Western engagement was characterized by dynamic interactions and reciprocal influences between Ottoman and European cultures, especially through the influx of European, notably Italian, pharmacists into Ottoman territories. A prominent example of this cultural exchange is evident in Istanbul's Galata district, a former Genoese colony from 1273 to 1453¹⁰. This phase not only introduced educational innovations but also facilitated the transmission of European medical developments through translations, enriching the local medical landscape and paving the way for more systematic practices and education.

European Travelogues on Early Italian Influence in Ottoman Pharmacy

Sixteenth-century European travelogues provide detailed accounts that highlight the adoption of medical knowledge and practices, illustrating the cross-cultural exchange between the Ottoman Empire and Italy. These documents reveal the complex dynamics of medical practice, pharmacy, and the social fabric of 16th-century Ottoman cities through the personal narratives of travelers such as Luigi Bassano, Hans Dernschwam, Stephan Gerlach, Reinhold Lubenau, and Friedrich Seidel¹¹. Their observations offer a valuable perspective on the medical and pharmaceutical landscape of the time, documenting exchanges of knowledge, goods, and practices that profoundly influenced the history of pharmacy.

Luigi Bassano's recollections from his stay in the Ottoman Empire between 1532 and 1540 highlight the popularity of Venetian soaps in Istanbul¹². Hans Dernschwam, writing about his experiences from 1553 to 1555, notes that Ottoman physicians not only utilized Italian pharmacological sources but also benefited directly from Italian pharmacists' contributions¹³. Stephan Gerlach, during his 1577-1578 visit, mentions a pharmacy in Galata owned by an individual named Antonio, emphasizing the widespread use of Italian in the area and the role of Venetian merchants in making Galata a hub of Italian interaction¹⁴.

Reinhold Lubenau, present in Ottoman territories from 1587 to 1589, discusses the local shortcomings in medical sciences and highlights the significant roles of Jewish physicians, including Abraham, a Jewish doctor educated at the University of Padua who practiced in Istanbul. Lubenau also notes the arrival of Italian youths in Galata seeking exploration and financial opportunities in medicine and pharmacy, highlighting the scarcity of medicines

⁹ RUSSELL G.A., Physicians at the Ottoman court. *Med Hist*, vol. 34, no. 3, 1990, pp. 243-267.

¹⁰ MARMARA R., *Osmanlı Başkentinde Bir Levanten Semti Galata-Pera* [A Levantine District in the Ottoman Capital Galata-Pera]. 4th ed. İstanbul, Türkiye İş Bankası Kültür Yayınları, 2023.

¹¹ YERASIMOS S., *Les Voyageurs dans l'Empire Ottoman (XIVe-XVIe siècles)* [Travelers in the Ottoman Empire (14th-16th centuries)]. Ankara, Société d'Histoire Turque, 1991.

¹² BASSANO L., *Kanuni Dönemi Osmanlı İmparatorluğu'nda Gündelik Hayat* [Daily life in the Ottoman Empire during the reign of Suleiman the Magnificent]. trans: Selma Cangı. İstanbul, Yeditepe Yayınevi, 2011.

¹³ DERNSCHWAM H., *İstanbul ve Anadolu'ya Seyahat Günlüğü* [Travel diary to Istanbul and Anatolia]. 2. ed. trans: Yaşar Önen. Ankara, Kültür Bakanlığı Yayınları, 1992.

¹⁴ GERLACH S., *Türkiye Günlüğü, 1577-1578* [Diary of Turkey, 1577-1578]. vol: 2. trans: Türkis Noyan. İstanbul, Kitap Yayınevi, 2007.

in the area's pharmacies¹⁵. Friedrich Seidel, observing during 1591-1596, revisits the presence of Italian pharmacists in Galata, though without specific details on the pharmacies¹⁶.

These narratives collectively underscore the significant cultural and scientific exchanges in medical and pharmaceutical practices of the era, making these travelogues invaluable for understanding the impact of Ottoman-Italian relations on the history of pharmacy.

Italian as the Pharmaceutical Language in Ottoman Pharmacy

By the next century, Italian had become the professional language among Ottoman pharmacists, marking a shift where translations from European sources became more prevalent¹⁷. Notably, figures like Salih ibn Nasrullah (d. 1669), also known as Ibn Sallum, who led the "Tıbb-ı Cedid" (New Medicine) movement, emerged during this period¹⁸. Italian was widely used as the prescription language in Ottoman pharmacy, leading to medical documents, including prescriptions, terminology, titles, drug labels, and pharmacopeias, predominantly using Italian or being heavily influenced by it. Pharmacists of the era upheld traditional Italian practices and measurement systems. While Italians largely managed the importation of pharmaceutical products into Constantinople, the volume was modest. Key imports from Venice included medicinal items such as powders, borax, turpentine, thrips, lemon balm, and various chemicals, underscoring the lasting Italian impact on Ottoman pharmacy practices¹⁹.

A striking example of Italian influence on Ottoman pharmacy is the Turkish word "ispençiyar" (IPA: ispen'tʃijar), meaning "apothecary or traditional pharmacist." This term, a phonetic adaptation of the Italian "speziale," illustrates the Turkification of Italian vocabulary and has been in use for over five centuries²⁰. It predates the French influence in Ottoman medicine and pharmacy, which emerged in the 19th century. The enduring presence of "ispençiyar" is noted in the travelogue of Evliya Çelebi, a distinguished 17th-century Turkish traveler. Similarly, the Turkish terms "reçete" (reʃete), meaning "prescription," and "reçine," (re'tʃine) meaning "resin," derive from the Italian "ricetta" and "resina," respectively²¹.

The influence of Italian on Turkish pharmaceutical terminology is highlighted by the old Turkish proverb: "Venedik'ten tiryak gelinceye kadar, Mısır'da adamı yılan helak eder." Translated as "Until the theriac comes from Venice, the snake will have destroyed the man

¹⁵ LUBENAU R., *Reinhold Lubenau Seyahatnamesi: Osmanlı Ülkesinde 1587-1589* [Reinhold Lubenau's Travelogue: In the Ottoman Lands 1587-1589]. trans: Türkis Noyan. İstanbul, Kitap Yayınevi, 2012.

¹⁶ SEIDEL F., *Sultanın Zindanında: Osmanlı İmparatorluğu'na Gönderilen Bir Elçilik Heyetinin İbret Verici Öyküsü (1591-1596)* [In the Sultan's Dungeon - The Edifying Tale of an Embassy Delegation Sent to the Ottoman Empire (1591-1596)]. trans: Türkis Noyan. İstanbul, Kitap Yayınevi, 2010.

¹⁷ KAHYA, DEMIRHAN-ERDEMİR, 1997, *op. cit.*

¹⁸ İHŞANOĞLU E., ŞEŞEN R., BEKAR M.S., GÜNDÜZ G., BULUT V., *Osmanlı Tıbbi Bilimler Literatürü Tarihi* [History of Ottoman Medical Sciences Literature]. vol. 1. İstanbul, IRCICA Yayınları, 2008.

¹⁹ MARMARA, 2023, *op. cit.*

²⁰ BAYLAV, 1968, *op. cit.*

²¹ NIŞANYAN S., *Nişanyan Sözlük: Çağdaş Türkçenin Etimolojisi* [Nişanyan Dictionary: The Etymology of Contemporary Turkish]. İstanbul, Liberus Yayınları, 2022.

in Egypt,” this saying metaphorically warns against the dangers of delay and procrastination²². It not only reflects a linguistic legacy but also emphasizes the deep historical trade and cultural connections between Italy and the Ottoman Empire, demonstrating the significant impact of Italian language and culture on the Ottoman pharmaceutical lexicon and knowledge.

Italian Influences in the 18th and 19th Centuries

The 18th century marked a significant era of transformation and synthesis in medical practices, as Ottoman medicine began integrating European medical advancements. Nuh ibn Abdulmennan (d. 1707), a Christian Cretan convert to Islam who studied medicine in Padua, became the Ottoman Sultan’s chief physician. His notable contributions included translating Greek medical works into Turkish and implementing regulations to protect medical practices from fraud. He also translated sections on pharmaceutical pastes and syrups by Venetian scholar Giorgio Melichio, producing the *Terceme-i Akraadin-i Melikyu* (Translation of Melichio’s Pharmacopoeia)²³. Similarly, Abbas Vesim ibn Abdurrahman (d. 1760) was instrumental in integrating European medical knowledge. He worked with European physicians in Istanbul to translate works by several Italian scholars, encapsulated in his work *Düstürü’l-Vesim fi Tıbbi’l-Cedid ve’l-Kadim* (Vesim’s Regulations for New and Old Medicine)²⁴. Cerrah Ali translated Antonio Campana’s *Pharmacopoeia* into Turkish as *Terceme-i Farmakopiya Kampinanas Antonyo* (Translation of Antonio Campana’s Pharmacopoeia)²⁵ and Osman ibn Abdurrahman (d. 1786) translated Pietro Andrea Mattioli’s *Discorsi* into Turkish, entitled *Kitab al-Nebat* (Book of Plants) in four volumes²⁶. These efforts underscore the Ottoman Empire’s commitment to embracing and disseminating Italian pharmaceutical and botanical knowledge, enriching the dialogue between diverse medical traditions.

The influence of Italian physicians on Istanbul’s medical and pharmaceutical landscape during the 18th and 19th centuries is significant, as Marmara reports²⁷. This is illustrated by a Venetian theriac advertisement printed in Venice and circulated in Istanbul in the 18th century, underscoring Ottoman interest in theriacs²⁸. Considered one of the earliest pharmaceutical advertisements in the Ottoman Empire, it highlights the long-standing medicinal

²² TEKINER H., MAT A., Les thériaques dans la littérature turque [Theriatics in Turkish literature]. *Turkish Studies*, vol. 9, no. 7, 2014, pp. 517-524.

²³ NUH IBN ABDULMENNAN., *Terceme-i Akraadin-i Melikyu* [Translation of Melichio’s Pharmacopoeia] Suleymaniye Manuscripts Library (Istanbul), Hamidiye Collection no: 1010. 229 folios, 1748.

²⁴ VESIM ABBAS., *Düstürü’l-Vesim fi Tıbbi’l-Cedid ve’l-Kadim* [Vesim’s Regulations for New and Old Medicine]. Suleymaniye Manuscripts Library (Istanbul), Topkapı Sarayı Kütüphanesi Emanet Collection no: 1821. copyist: Solakzâde Ahmed. 514 folios, 1765.

²⁵ CERRAH ALI., *Terceme-i Farmakopiya Kampinanas Antonyo* [Translation of Antonio Campana’s Pharmacopoea]. Turkish National Library (Ankara), Catalogue no: A. 3479. 95 folios, undated [18th century].

²⁶ OSMAN IBN ABDURRAHMAN., *Kitab el-Nebat* [Book of Plants] Suleymaniye Manuscripts Library (Istanbul), Hacı Mahmud Efendi Collection no: 5505. 60+298 folios, undated [18th century].

²⁷ MARMARA, 2023, *op. cit.*

²⁸ TEKINER, MAT, 2014, *op. cit.*

use of theriacs, evidenced by their listing in the 1835 inventory of Istanbul's Maltepe Military Hospital²⁹. Additionally, an 1876 advertisement identifies the Della Sudda Pharmacy and the Central Pharmacy as major distributors of Venetian theriac in the Orient, demonstrating the sustained popularity of these remedies into the 19th century³⁰.

Mustafa Behçet Efendi (1774–1834), who served as the chief physician of the Ottoman Palace until his death, played a key role in introducing European medical knowledge to the Ottoman Empire. He translated significant Italian medical texts into Turkish, addressing ailments such as smallpox, syphilis, and cholera. His translations included Dr. Royini's treatise on simple medicines and Edward Jenner's pioneering work on smallpox vaccination, making crucial medical information accessible to Turkish-speaking practitioners³¹. Additionally, Behçet Efendi's contributions included translating Antonio Caldani's *Institutiones Physiologicae* to enhance understanding of physiology, and Joseph Jacob von Plenck's treatise *Methodus Nova et Facilis* (A New and Easy Method), which discusses the use of mercury for treating syphilis, from Italian³². These translations were significant in integrating Eastern and Western medical traditions, facilitated notably through the use of the Italian language.

Interestingly, in 1805, Sultan Selim III (r. 1789–1807) established the “Tabibhane” (School of Physicians) within the Imperial Shipyard in the Kasımpaşa quarter of Istanbul to address the navy's need for physicians. The school featured a training hospital staffed with physicians and surgeons, as well as a separate facility dedicated to theoretical medical and surgical training. According to the 1807 regulations, instruction was conducted in Italian, a choice made because many students were already familiar with the language from their work in pharmacies and because Italian medical texts were readily accessible³³.

The First Pharmacopeias and the Modernization of Pharmacy Education

The early 19th century saw significant advancements in pharmacy education and resources within the Ottoman Empire, starting with the publication of the first pharmacopeia in Istanbul in 1818³⁴. This pharmacopeia, written in Greek for the Empire's Greek-speaking pharmacists, was a translation of Luigi Valentino Brugnatelli's *Farmacopea*, first published in 1802. The translator, Dionysiou Pyrrou, an Orthodox priest and scholar, produced a comprehensive volume that included 214 monographs, indices, and a guide on drug preparation tools³⁵.

²⁹ TEKINER, MAT, 2014, *op. cit.*

³⁰ BAYTOP T., *Eczahane'den Eczane'ye: Türkiye'de Eczaneler ve Eczacılar, 1800-1923* [From Eczahane to Eczane: Pharmacies and Pharmacists in Turkey, 1800-1923]. 2nd ed. Istanbul, Bayer Healthcare, 2006.

³¹ İHSANOĞLU, ŞEŞEN, BEKAR, et al., 2008, *op. cit.*

³² KAHYA E., *Mustafa Behçet Efendi ve Türkçe İlk Fizyoloji Kitabı* [Mustafa Behçet Efendi and the First Turkish Physiology Book]. Ankara, Atatürk Kültür Merkezi Yayınları, 2017.

³³ GENÇER A.I., İstanbul tersanesinde açılan ilk tıp mektebi [The first medical school opened in the Istanbul shipyard]. *Tarih Dergisi*, vol. 31, 1977, pp. 301-316.

³⁴ SANDALCI M., İstanbul i farmacisti italiani e una farmacopea in italiano pubblicata a Istanbul [Istanbul, the Italian Pharmacists, and a Pharmacopoeia in Italian Published in Istanbul]. In *Presenze Italiane a Istanbul*. B. Evren, ed. Istanbul, Ferrolì, 2008, pp. 196-201.

³⁵ ΠΥΡΡΟΣ Δ., *Φαρμακοποιία γενική* [General Pharmacopoeia]. Κωνσταντινούπολη, [n.a.], 1818.



Fig. 1. Cover page of the first Ottoman pharmacy law, enacted in 1852 and published in Ottoman Turkish, French, and Italian. Source: Istanbul University Rare Books Library.

ing dosages, therapeutic applications, and guidance on avoiding incompatible drug combinations. It became an invaluable resource for healthcare practitioners and adopted the Austrian weight system for standardizing medicinal measurements across various European norms (fig. 2)⁴⁰.

Another milestone was Dr. Karl Ambros Bernard's publication of the *Pharmacopoea Castrensis Ottomana* in 1844 in Istanbul, establishing the Empire's first military pharmacopeia³⁶. This work, a condensed adaptation of the *Pharmacopoea Austriaca*, was notable for incorporating Latin, French, Turkish, and Italian, reflecting the linguistic diversity of the military pharmacists and enhancing their understanding and preparation of medications³⁷. This pharmacopeia was indicative of broader efforts toward modernizing pharmacy education and practice.

In 1852, the Ottoman Empire promulgated its first official civil pharmacy law, published in Turkish, French, and Italian³⁸. This law provided operational guidelines and defined the scope of pharmacy services (fig. 1)³⁹.

Further enhancing the pharmacy landscape, in 1859, Dr. Giorgio Spagnolo published the *Vade Mecum Tascabile di Materia Medica e Farmaceutica* in Istanbul. Drawing on two decades of practical experience, this Italian-language guide detailed essential pharmacological knowledge for the Empire's medical professionals, includ-

³⁶ BERNARD C.A., *Pharmacopoea Castrensis Ottomana / Pharmacopée Militaire Ottomane* [Ottoman Military Pharmacopoeia]. Constantinople, Impr. de Henri Cayol à Pera, 1844.

³⁷ TEKINER H., MAT A., Les pharmacopées turques de langue française [Turkish pharmacopeias written in French]. *Revue d'Histoire de la Pharmacie*, vol. 96, no. 361, 2009, pp. 17-22.

³⁸ ANONYMOUS. *Nizamname-i Eczacıyan der Memalik-i Osmaniye / Règlement sur la Pharmacie civile dans l'Empire Ottoman / Regolamento Sulla Farmacia Civile nell'Impero Ottomano* [Regulation on Civil Pharmacy in the Ottoman Empire]. [Constantinople], École Impériale de Médecine, 1852.

³⁹ TEKINER H., ULU A., The historical evolution of the Turkish pharmaceutical legislation from 1852 to the present. *Farmacia*, vol. 63, no. 4, 2015, pp. 619-622.

⁴⁰ SPAGNOLO G., *Vade Mecum Tascabile di Materia Medica e Farmaceutica ad Uso dei Medici, Chirurghi e Farmacisti dell'Impero Ottomano* [Pocket Vade Mecum of Materia Medica and Pharmacy for the Use of Physicians, Surgeons, and Pharmacists of the Ottoman Empire]. Constantinople, Presso la Società

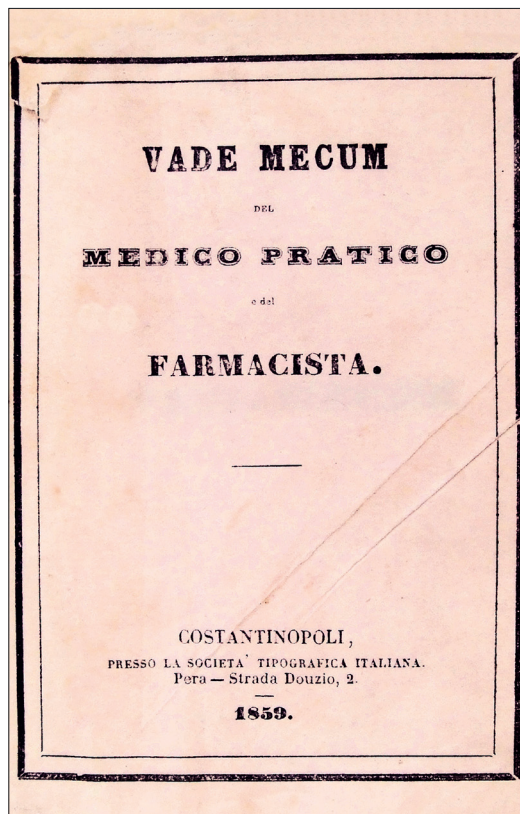


Fig. 2. Cover page of Dr. Spagnolo's *Vade Mecum*, published in Istanbul in 1859. Source: Abdi İbrahim Archives for the History of Pharmacy, Istanbul.



Fig. 3. Three letterheads from Italian pharmacies in Istanbul, the first two dated 1848 and the third dated 1867. Source: Abdi İbrahim Archives for the History of Pharmacy, Istanbul.

Collectively, these publications exemplify the rich fabric of intercultural exchange and the advancement of pharmacy education and practice in the Ottoman Empire, highlighting the significant influence of Italian and broader European expertise on local medical customs.

Italian Pharmacies and Pharmacists in the Ottoman Empire

Historical records from the first half of the 19th century, preserved at the Abdi İbrahim Archives for the History of Pharmacy, document the presence of numerous Italian pharmacies in Ottoman Istanbul. These include notable establishments such as Farmacia al Serpente d'Oro, Farmacia del Leone, and Farmacia della Marina (fig. 3)⁴¹. Situated on what is now

Tipografica Italiana, 1859.

⁴¹ SANDALCI M., En İtalyan eczacılar [The most Italian pharmacists]. *Eczacı Dergisi*, vol. 6, no. 40, 2008, pp. 68-69.

Meşelik Sokak in Beyoğlu, the Italian Pharmacy is closely linked to the Italian Hospital, founded in 1825⁴². Sandalcı (2006) notes the long-standing impact of the Italian Pharmacy, managed by Terenzo and Vincent Konsoli from 1883 to 1921, and later by Anastas Zafiropoulo, emphasizing its role in shaping Istanbul's pharmaceutical history⁴³.

During the mid-19th century, Italian pharmacists such as the Canzuch brothers—Noël (1833–1905), François (?–1897), and Joseph (1835–1911); along with Eduardo Ottoni (?–1869); Antonio Calleja (1806–1893); and Francesco (1814–1865) and Giorgio della Sudda (1835–1913)—significantly influenced the pharmaceutical landscape of Ottoman Istanbul⁴⁴.

Originating from an Italian family of Maltese descent, the Canzuch brothers established the British Pharmacy in 1833, one of the first European-style pharmacies in the Ottoman Empire⁴⁵. Ottoni, notably, assumed the presidency of the pharmaceutical committee of the Imperial Military School of Medicine and led the centralization of pharmaceutical production for the Ottoman military, enhancing efficiency and cost-effectiveness⁴⁶. Educated in Italy, Antonio Calleja was instrumental in teaching chemistry and Galenic pharmacy at the Pharmacy Class and played a crucial role in establishing pharmacy regulations in 1861. His pharmacy became a major depot for European pharmaceuticals, significantly impacting the local market⁴⁷. Francesco della Sudda, also known as Faik Pasha, through his leadership at the Military Central Pharmacy of the Ottoman army, made significant contributions to military health during the Crimean War (1853–1856). His efforts in materia medica collection from Anatolia and participation in international exhibitions demonstrated the integration of European practices with local needs⁴⁸.

Giorgio della Sudda, also known as Faik Pasha, followed in his father's footsteps, enhancing the educational and practical aspects of pharmacy after his studies in Paris. He served on the faculty of the Imperial Medical School and held significant positions within

⁴² CERVATI R.C., *Indicateur Ottoman - Annuaire-Almanach du Commerce de l'Industrie, de l'Administration et de la Magistrature* [Ottoman Illustrated Directory-Almanac of Commerce, Industry, Administration and Magistracy]. Constantinople, Imp. et Lit. Centrales du Journal la Turquie, 1881.

⁴³ SANDALCI M., *Belgelerle Türk Eczacılığı, 1840-1948: Eczacılar, Ecza Depoları* [Turkish Pharmacy with Documents, 1840-1948: Pharmacists, Pharmaceutical Warehouses]. vol. 5. İstanbul, Dr. Nejat F. Eczacıbaşı Vakfı Yayınları, 2006.

⁴⁴ SANDALCI, 2008, *op. cit.*

⁴⁵ TEKINER H., Osmanlı eczacılığında bir kilometre taşı: İngiliz Eczanesi, İstanbul [A milestone in Ottoman pharmacy: the British Pharmacy in Istanbul. *Osmanlı Bilimi Araştırmaları*, vol. 11, no. 1-2, 2010, pp. 259-272.

⁴⁶ YILDIRIM N., İtalyan asıllı bir Osmanlı eczacısı: Edouard Ottoni [An Ottoman Pharmacist of Italian Origin: Edouard Ottoni]. *Eczacılık Tarihi Araştırmaları - VI. Türk Eczacılık Tarihi Toplantısında (İstanbul, 5-7 Haziran 2002) Sunulan Bildiriler*. A. Mat, ed. İstanbul, İstanbul Üniversitesi Eczacılık Fakültesi Yayınları, 2003, pp. 173-194.

⁴⁷ IŞIL-ÜLMAN Y., Il professor Antoine Calleja e la sua farmacia [Professor Antoine Calleja and his pharmacy]. In *Presenze Italiane a Istanbul*. B. Evren, ed. İstanbul, Ferrolì, 2008, pp. 214-219.

⁴⁸ NICOLAS M., MAT A., Due farmacisti ottomani: Della Sudda, padre e figlio [Two Ottoman pharmacists: Della Sudda, father and son]. In *Presenze Italiane a Istanbul*. B. Evren. İstanbul, Ferrolì, 2008, pp. 220-223.



Fig. 4. Photograph of Giorgio della Sudda, also known as Faik Pasha. The Ottoman text identifies him as “His Excellency Della Sudda Faik Pasha.” Source: *Nevsal-i Afiyet* (1899, p. 260).

the War Ministry’s Health Council and the Army’s Pharmacy Department⁴⁹ (fig. 4). Giorgio’s involvement in international exhibitions and his leadership of the Ottoman Central Pharmacy continued his family’s tradition of excellence in the pharmacy sector⁵⁰.

Our review of the Turkish Presidential State Archives has uncovered extensive records pertaining to pharmacists of Italian origin from the Ottoman era, encompassing issues from legal matters to salaries and appointments. Additionally, *Commerce Almanacs* from 1868 to 1914, along with historical records, highlight the presence of Italian-descended pharmacists in Istanbul and cities like Erzurum, Van, and Aleppo⁵¹.

Individuals such as François and Joseph Barozzi, Giovanni Ricci, Eugenio della Sudda, Giuseppe Ottoni, Marc Raimondi, and Silvio Giannetti exemplify the diverse Italian impact on Turkish pharmacy. After a hiatus caused by the Tripolitanian War (1911–1912), the interaction between Turkish and Italian pharmacists persisted into the modern Turkish Republic, where Giannetti gained renown for his pharmaceutical innovations⁵².

Ottoman and Turkish Pharmacists in Italy

Throughout the 19th and 20th centuries, many Ottoman and Turkish pharmacists pursued their education in Italy, reflecting the significant influence of Italian pharmacy education. Notable among them was Vicen Sinapian, an Armenian pharmacist from the Ottoman era, who graduated from the University of Pisa in 1841⁵³. Joseph Zanni, another Armenian pharmacist, studied in Italy before earning a doctorate in Germany, where he established a chemical analysis laboratory and managed a pharmacy in Istanbul⁵⁴. In the Republican era, Şeref Diler, who graduated from the pharmacy school in Florence in 1936, returned to Istanbul to direct the Kuzguncuk Pharmacy and later led Diler’s Pharmaceutical Prepara-

⁴⁹ BESIM OMER., *Nevsal-i Afiyet* [Health Yearbook]. vol. 1. İstanbul, Alem Matbaası, 1899.

⁵⁰ NICOLAS, MAT, *op. cit.*

⁵¹ CERVATI R., *L’Indicateur Constantinopolitain: Guide Commercial, première année 1868/69* [The Constantinopolitan Indicator: Commercial Guide, First Year 1868/69]. Constantinople, Imp. G.B. Pagano, 1868. CERVATI R.C., *Annuaire Oriental du Commerce, de l’Industrie, de l’Administration et de la Magistrature* [Oriental Directory of Commerce, Industry, Administration and Judiciary]. Constantinople, Impr. J. Pallamary, 1891. ANONYMOUS. *Annuaire Oriental: Commerce, Industrie, Administration, Magisture de l’Orient* [Oriental Directory: Commerce, Industry, Administration, Magistracy of the East]. Constantinople, Impr. Autrichienne Ferd. Walla, 1914.

⁵² TEKINER, 2010, *op. cit.*

⁵³ BAYTOP T., İzmirli bir kişiye Pisa Üniversitesi tarafından verilmiş olan “Doctor in Medicina” diploması hakkında [About the “Doctor in Medicina” diploma given by the University of Pisa to a person from İzmir]. In *Türk Eczacılık Tarihi Araştırmaları*. İstanbul, 2000, pp. 302-304.

⁵⁴ BAYTOP, 2006, *op. cit.*

tions Laboratory, making significant contributions to the pharmaceutical sciences⁵⁵. Additionally, Rüştü Akın Çubukçu, who began his pharmacy studies at Istanbul University and continued at Perugia University on a scholarship, graduating in 1967, went on to hold key positions within the Turkish Pharmacists Association and the Ankara Chamber of Pharmacists, and authored memoirs about his experiences in Italy⁵⁶. These individuals highlight the enduring educational and professional exchanges between Italy and Turkey in the field of pharmacy.

Historical Presence of Italian Pharmaceutical Companies in Turkey

The presence of Italian pharmaceutical companies in Ottoman Turkey dates back to the 19th century, starting with representative offices for Zambelletti and Cav. Parma in Istanbul⁵⁷. After the establishment of the Republic of Turkey in 1923, companies such as Carlo Erba, Istituto Nazionale Medico Farmacologico, and Zambelletti expanded their operations (fig. 5). Notable products introduced to the Turkish market include Carlo Erba's Erbamil and Opopeptol Erba, along with Zambelletti's Bismarsol. The evolving political dynamics between Italy and Turkey during this period subtly influenced their commercial relations, resulting in a slight increase in the availability of licensed Italian pharmaceutical products in Turkey during the 1930s⁵⁸.

In the post-World War II era, particularly after the 1954 Foreign Capital Incentive Law, Turkey saw a resurgence of foreign pharmaceutical companies, with Italian firms like Bruschettini and Carlo Erba making significant inroads. The bilateral commercial agreement between Italy and Turkey in 1957 further boosted Italian pharmaceutical imports⁵⁹. From the onset of the Italian economic miracle until the mid-1980s, often regarded as a golden age for Italian pharmaceutical firms in Turkey, products from companies like Ange-



Fig. 5. A photograph of a bottle of “Olio Etereo di Felce Maschia” (Essential Oil of Male Fern) by Carlo Erba, dating from the first quarter of the 20th century. Source: Istanbul University Museum of the History of Pharmacy.

⁵⁵ BAYTOP T., *Laboratuvar'dan Fabrika'ya: Türkiye'de İlaç Sanayii (1833-1954)* [From Laboratory to Factory: The Pharmaceutical Industry in Turkey (1833-1954)]. Istanbul, Bayer Türk, 1997.

⁵⁶ ÇUBUKÇU A., *Hacettepe Eczacılık Nerede?* [Where is Hacettepe Faculty of Pharmacy?]. Istanbul, Berfin Yayınları, 2017.

⁵⁷ MARMARA, 2023, *op. cit.*

⁵⁸ ANONYMOUS. 1262 numaralı İspençiyari ve Tıbbi Müstahzarlar Hakkındaki Kanunun neşri tarihinden 31.12.1930 tarihine kadar ruhsatnamesi verilen yerli ve ecnebi müstahzarat listesi [List of domestic and foreign preparations licensed from the date of publication of the Law on Pharmaceutical and Medical Pharmaceutical Products No. 1262 until 31.12.1930]. Ankara, Türkiye Cumhuriyeti Sıhhat ve İçtimai Muavenet Vekaleti Yayınları, 1931.

⁵⁹ ANONYMOUS. İtalya'dan gözlük camı ve ilaç ithal edilecek [Spectacle lenses and medicines to be imported from Italy], *Milliyet Gazetesi*, 14 May 1957, p. 2.

lini, Bracco, and Farmitalia gained widespread distribution across Turkey⁶⁰. One notable product, Morrucal, a blend of calcium and cod liver oil developed by Dr. Fontana, became particularly popular from the 1950s through the 1970s, symbolizing the deep market penetration and consumer acceptance of Italian pharmaceutical products (fig. 6)⁶¹.

Since the early 2000s, Italian pharmaceutical companies such as Menarini, Recordati, and Italfarmaco have seen significant growth in Turkey, taking leading roles through strategic acquisitions, substantial investments, and the launch of innovative products across various health sectors (Table 1). Their entry and expansion in the Turkish market highlight the enduring and evolving Italian influence on Turkey’s pharmaceutical landscape. Additionally, Turkey’s pharmaceutical pricing policies, which reference prices in five EU countries, including Italy, underscore the interconnectedness between the Turkish and Italian pharmaceutical markets and Italy’s ongoing impact on Turkish healthcare⁶².

Company Name	Entry Year	Product Scope
Menarini Group	2001	Cardiology, Gastroenterology, Inflammation, Oncology, Respiratory System
Chiesi Farmaceutici	2007	Allergy, Cardiovascular, Neonatal, Pain/Inflammation, Rare Diseases, Respiratory System
Recordati Group	2008	Cardiovascular, Rare Diseases, Urology
Italfarmaco SpA	2009	Bone Health, Infant and Maternal Health, Women’s Health
Kedrion Biopharma	2012	Hematology, Immunology, Intensive Care, Neurology, Transplantation
Angelini Pharma	2015	Central Nervous System, Consumer Health, Musculoskeletal System, Oral and Throat Health, Respiratory System

Table 1. Overview of Italian and Italian-Partnered Pharmaceutical Companies in the Turkish Market since 2000.

Conclusion

The history of Turkish pharmacy is deeply intertwined with Italian influences, spanning from the Renaissance to the present. The profound impact of Italian culture, language, and educational practices on Turkish pharmacy as an independent scientific discipline has been

⁶⁰ BAYLAV, 1968, *op. cit.*
⁶¹ ANONYMOUS. *Farmaceutici D.L. Fontana-Terni: Morrucal*. Istanbul, Pedrelli Ticaret, 1952.
⁶² TURKISH MINISTRY OF HEALTH. *Beşeri tıbbi ürünlerin fiyatlandırılması hakkında tebliğ* [Communiqué on pricing of medicinal products for human use]. Official Gazette number: 30195, date: 29 Sep 2017.

revealed through extensive archival research and diverse sources. The adoption of Italian as the prescription language during the Ottoman period and ongoing collaborations between Turkish and Italian pharmaceutical sectors underscore a rich narrative of intercultural exchange.

Italian pharmacists were notably influential during the Ottoman era, enhancing pharmaceutical production at the Central Pharmacy of the Army and advancing military healthcare. They also contributed significantly as educators at the Imperial Military School of Medicine and as board members in pharmaceutical societies, helping to integrate Italian pharmaceutical knowledge and fostering a scientific approach in the field.

Currently, Italy ranks as the fifth largest supplier of pharmaceuticals to Turkey, with annual imports valued at 350 million dollars, following Germany, China, the USA, and South Korea. This modern engagement underscores the historical ties and continues to strengthen the intercultural bonds between the two countries⁶³.

The enduring influence of Italian pharmaceutical education and practices in Turkey is a testament to the power of cross-cultural exchange in shaping the pharmacy field. This impact continues to inspire new generations of pharmacists and healthcare professionals, acting as a bridge between cultures and influencing the future of pharmacy in both nations.

Future research should involve collaborative efforts between Turkish and Italian scholars to fully understand the multifaceted aspects of this influence. Studies should explore Italian archival documents, records of Turkish pharmacists graduating from universities like Pavia and Pisa, and accounts from travelers, diplomats, and missionaries. Such a comprehensive approach will further elucidate the complex interactions in the historical exchange of pharmaceutical knowledge and practices.



Fig. 6. 1952 advertisement brochure from Farmaceutici Dr. L. Fontana-Terni, promoting the health benefits of Morruccol cod liver oil. Source: H. Tekiner Collection.

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⁶³ ANONYMOUS. 2022 *Türkiye İlaç Sektörü* [2022 Pharmaceutical Sector of Turkey]. İstanbul, İlaç Endüstrisi İşverenler Sendikası, 2023.

The author dedicates this work to the memory of Mr. Angelo Beccarelli (1953–2022), an esteemed pharmacist and revered former president of the Italian Academy of the History of Pharmacy whose inspiring legacy endures.

UNA BREVE STORIA DELLE INFLUENZE ITALIANE SULLA FARMACIA TURCA

Abstract

L'eredità italiana ha inciso significativamente sulla farmacia turca a partire dal periodo ottomano. Già dal XVII secolo, farmacisti italiani e levantini hanno esercitato un'influenza marcata sulle pratiche farmaceutiche di Istanbul, in particolare nel quartiere di Galata. Il termine “ispençiyar”, derivato dall'italiano “speziale”, è emblematico di tale impatto. Documenti come la “Farmacopea Geniki”, pubblicata a Istanbul nel 1818, una versione greca della farmacopea di Luigi Brugnatelli, e la prima legislazione sull'esercizio della farmacia dell'impero, introdotta nel 1852, testimoniano l'assimilazione della conoscenza farmaceutica italiana. Figure professionali quali Eduardo Ottoni, Antonio Calleja e Francesco della Sudda (noto anche come Fayk Pasha) hanno avuto un ruolo chiave nello sviluppo della farmacia militare e nell'istruzione farmaceutica. L'influenza italiana continua a manifestarsi, evidenziata dalla formazione di farmacisti turchi in Italia e dall'espansione di compagnie farmaceutiche italiane come Menarini, Recordati e Italfarmaco in Turchia, sottolineando l'importanza dell'expertise italiana e rafforzando i legami tra le tradizioni farmaceutiche dei due paesi.