Natalia Bachour. *Oswaldus Crollius und Daniel Sennert im frühneuzeitlichen Istanbul: Studien zur Rezeption des Paracelsismus im Werk des osmanischen Artzes Ṣāliḥ b. Naṣrullāh ibn Sallūm al-Ḥalabī.* Freiburg: Centaurus Verlag & Media UG, 2015. 496 pages. ISBN: 9783862260522.

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The book under review by Natalia Bachour, who focuses her early modern period medicine and history of science studies on knowledge transfer and translation studies and is a lecturer (wissenschaftliche Mitarbeiterin) at the University of Zurich, is based on her doctoral dissertation of the same name, which she completed in 2011 at Heidelberg University. Her study examines the shift to Paracelsus' (d. 1541) medicine in the Ottoman Empire, by using translations made from Latin to Arabic in the 17th century when Ṣāliḥ b. Naṣrullāh (Ibn Sallūm; d. 1080/1669) was working as the chief physician. At the center of the study is the work of Oswaldus Crollius (d. 1609), who adopted Paracelsus' understanding of medicine, known as *Basilica chymica* in Latin and *al-Kīmyāʾ al-malakiyya* in Arabic. The book also includes the work *De chymicorum cum Aristotelicis et Galenicis consensu ac dissensu* (*al-Ṭibb al-kīmyāʾī al-jadīd* in Arabic) by Daniel Sennert (d. 1637), who was searching for a unison between the medicines of Paracelsus and Galen (d. *circa* 200 AD) and had an eclectic paradigmatic understanding, as an additional study to support the theoretical basis of her research. In the second part of the book, Bachour explains that these two works are actually a single book that complements each other in terms of

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content. In addition, these two works are recorded under the name *Tarjamat al-Ṭibb al-jadīd al-kīmyāʾī li-Paracelsus*[1] as a single book in IRCICA's *History of the Literature of Medical Sciences during the Ottoman Period* (OTBLT).[2]

The book consists of six chapters and contains an introduction and conclusion. It additionally includes Arabic texts and German translations of selected sections from *al-Ṭibb al-kīmyāʾī al-jadīd* (414-64). Bachour states that the supplement has been prepared for those who want to do more extensive research. After presenting the summary about Paracelsus' medicine in the Introduction, Bachour explains with examples how the transfer of knowledge between the Ottoman Empire and Europe took place. That insufficient studies have been produced on this topic is particularly important to emphasize, as well as new studies being needed in order to determine the effect foreign physicians had on knowledge transfer in the Ottoman Empire. After her Introduction, Bachour outlines the current scientific status on the subject and presents a critical evaluation of the existing literature. Next, she presents the research question of her study and explains her research method. Bachour begins to subject *al-Ṭibb al-kīmyāʾī al-jadīd*, which she examines in terms of providing theoretical support alongside the study's central focus on *al-Kīmyāʾ al-malakiyya*, to a comparative analysis with respect to its original Latin versions, and she clearly explains which criteria she will use as regards to Paracelsus. The facts that Bachour categorizes the contents to be used in determining Paracelsus' impact and that she determined in advance and remained loyal to the framework she drew throughout the study allow the study to be followed holistically.

The second chapter, titled "Ṣāliḥ b. Naṣrullāh b. Sallūm al-Ḥalabī," consists of two subsections: Ṣāliḥ b. Naṣrullāh's life and works. She examines the life and

1 The work has attracted the attention of many researchers since the beginning of the twentieth century in medical history studies, due to its consideration of the introduction of Paracelsus' medicine to the Ottoman Empire. See, Paul Richter, "Paracelsus im Lichte des Orients", *Archiv für die Geschichte der Naturwissenschaften und der Technik* 6 (1913): 294–304; Felix Klein-Franke, "Paracelsus Arabus: Eine Studie zur 'alchemistischen Medizin' im Orient", *Medizinhistorisches Journal* 10/1 (1975): 50–54; Sami K. Hamarneh, "Jabir, Jildaki and Ibn Sallum and Arabic-Islamic Alchemy", *History and Philosophy of Science: Proceedings of the International Congress of the Philosophy of Science Islamabad, 8-13 December, 1979*, Ed. Hâkim Mohammad Said, III (Karaçi, 1980), 52–91; Emilie Savage-Smith, "Drug Therapy of Eye Diseases in Seventeenth-Century Islamic Medicine: The Influence of the 'New Chemistry' of the Paracelsians", *Pharmacy in History* 29/1 (1987): 3–28; Nil Sarı ve Bedizel Zülfikar, "The Paracelsusian Influence on Ottoman Medicine in the Seventeenth and Eighteenth Centuries," *Transfer of Modern Science and Technology to the Muslim World*, ed. Ekmeleddin İhsanoğlu (İstanbul: IRCICA, 1992), 157–79.

2 Ekmeleddin İhsanoğlu (Ed.), *History of the Literature of Medical Sciences during the Ottoman Period*, I (Istanbul: IRCICA, 2008), 275.

works of Ibn Sallūm through archival documents and secondary sources. In the biographical section, she investigates the education Ibn Sallūm received and his knowledge of Latin. While Bachour underlines that none of the primary sources contain any information about Ibn Sallūm having studied or known Latin, she also exemplifies the common belief in the Turkish literature that Ibn Sallūm spoke Latin with reference to Adnan Adıvar's passage in his book *Osmanlı Türklerinde İlim*: "Here is the first of these two physicians whose important medical works we have mentioned, namely, Ṣāliḥ Naṣrullāh bin Sallūm from Aleppo is a convert and has a knowledge of Latin or Greek" which is an unbased claim.[3] The second important issue she discusses in this chapter is whether or not Ibn Sallūm rejected humoral pathology in his work. Ibn Sallūm's books contain references to late medieval physicians such as Nikolaus von Salerno (d. *circa* 12th century) and Ibn Māsawayh[4] (d. 405-6/1015), an adherent to Paracelsus' medicine by the name of Oswaldus Crollius, European physicians like Daniel Sennert who had eclectically adopted Paracelsus' medicine by unifying it with Galenic medicine, and Dāvud al-Antākī (d. 1008/1599). Using examples of references to prophetic medicine, Bachour explains that Ibn Sallūm had an eclectic understanding that adopted humoral pathology.

Bachour followed the *OTBLT* in parallel when examining Ibn Sallūm's works. She divides the works that had been written by the order of Sultan Mehmed IV (r. 1648-1687) during the period when Ibn Sallūm was his chief physician, six translations and four doubtful works including the masterpiece titled *Gāyat al-bayān fī tadbīr badan al-insān,*[5] into three categories and displays them using figures (65). In this section, she reinforces the claim that Ibn Sallūm did not know Latin and that he had translated the works by using the facilities the head physician had been supplied with, by using a quote from the preface of the *Tarjamat Aqrābādhīn al-jadīd* that Nikola, one of the palace physicians, had translated.[6] She claims that the works under question had been attributed to Ibn Sallūm due to cataloging errors and most likely they were not written by Ibn Sallūm himself. Specifying the categorization and works in question is important in terms of correcting any

3 Adnan Adıvar, *Osmanlı Türklerinde İlim* (Istanbul: Maarif Matbaası, 1943), 112.

4 Ibn Māsawayh is also known as "the young Māsawayh" in order not to be confused with Yūḥannā b. Māsawayh (d. 243/857).

5 175 copies of the work were listed in *OTBLT*. İhsanoğlu (Ed.), *History of the Literature of Medical Sciences during the Ottoman Period*, I, 263–71. Although there are close to 100 of them in Turkey's libraries, according to İzgi, *Gāyat al-bayān* is the second most copied medical book in the Ottoman Empire. See, Cevat İzgi, *Osmanlı Medreselerinde İlim* (Istanbul: Küre Yayınları, 2019), 484–85.

6 İhsanoğlu (ed.), *History of the Literature of Medical Sciences during the Ottoman Period*, I, 274–75.

possible inaccuracies in the *OTBLT*. In the chapter, Bachour explains in detail the variations among the different copies of the books and chapters and which books they were created from using quotations and provides a general demonstration of the methods of quoting in the compilation of the books in Figure 3 (490). The figure clearly shows Ibn Sallūm's books to not be translations of a single book but to consist of a combination of translations from different sources.

The third chapter, titled "*Basilica Chymica* and its Arabic translation *al-Kīmyāʾ al-malakiyya* -Text Comparison" has four sub-headings. The first sub-heading provides information about the original Latin text, its Arabic translation, and its later Turkish translations. The second sub-heading explains in detail how the textual integrity of *al-Kīmyāʾ al-malakiyya* and *al-Ṭibb al-kīmyāʾī al-jadīd*, which are also explained in Ibn Sallūm's works, form a single book. The third sub-heading examines the harmony between the parts of *Basilica Chymica* and *al-Kīmyāʾ al-malakiyya* in addition to the formal comparison of the texts, with Table 3 (206-24) summarizing the original titles in Latin and Arabic, as well as the German translations and explanations. The fourth sub-heading shows the methods used in the translations by dividing the materials into different categories such as the translation of Paracelsus' concepts and drug descriptions and the comparative examples provided by the original texts. Bachour emphasizes that, although Crollius had not completely adopted the classical style in the writing of *Basilica Chymica*, the translator did divide *al-Kīmyāʾ al-malakiyya* in accordance with the classical method. Bachour explains the parts of the *Basilica Chymica* that did not get translated during the translation process as well as parts that had been added from other sources in *al-Kīmyāʾ al-malakiyya* by showing examples from the text. Bachour interprets this situation as the translator having had access to other sources widely available in Europe at that time in addition to the main translation text, benefitting from additional sources when needed. In addition to this interpretation, she states that some of the additions and omissions made to the translation were not based solely on the translation process: The translator himself had practical knowledge and experience and had made some changes according to these experiences. According to Bachour, the most striking method during translation is the cultural assimilation of the translated text. By explaining through examples how neutralization and assimilation procedures had been applied during the adaptation to humoral pathology, especially in the translation of concepts and terms belonging to Paracelsus's medical paradigm, the author shows through comparative passages how some parts were not included in the text in this context. She also states the remarkability of how the translation of the materials had been changed in accordance with the materials found or known

in the 17th century Ottoman Empire. Tables 4 (234-39) and 5 (261-65) respectively provide the original Latin and Arabic texts and German translations of the two different sections selected as examples and interpret the translation method for each passage (i.e., verbatim translation, summarizing, assimilation, and omissions). The fact that Bachour gives her findings on the text analysis through different examples during the presentation of the subject and presents these findings in the form of tables in order to exemplify them holistically is important in terms of strengthening her claims and the meticulousness of the study.

The fourth chapter, titled "*Basilica chymica* and its Arabic translation *al-Kīmyāʾ al-malakiyya*-Conceptual Comparison," goes more in depth conceptually regarding the translation comparisons made formally in Chapter 3. In this context, Bachour discusses the method followed in the use of the concepts of these two different paradigms during translation after giving a brief comparison of Paracelsus' *nova medicina* [new medicine] and Galen-Avicenna medicine (i.e., humoral pathology). The determination of the translation of the Latin text described in the third part being sometimes selective and the concepts that contradict humoral pathology being excluded from the text are exemplified through the concepts of two different paradigms. In this context, Bachour shows how the attempt had been made to integrate the translation text into humoral pathology by replacing the terms belonging to Paracelsus with humoral pathology terms or adding the corresponding terms. For example, although the prescription contents for a disease in the Latin text had been adopted exactly, the explanation of the treatment method according to Paracelsus's own paradigm is seen to have been excluded from the text and to have been attempted within the framework of humoral pathology as much as possible. Bachour states that astro-magic and occult concepts belonging to Paracelsus and elements of Christian culture had been generally assimilated during the translation. In summary, the concepts of *nova medicina* belonging to Paracelsus were subjected to assimilation while being translated into Arabic according to Bachour. In this context, the author emphasizes that the translated books attributed to Ibn Sallūm cannot be seen as an acceptance of Paracelism, which adopts the European understanding of *magia naturalis* and opposes humoral pathology.

Chapter 5, titled "The Ibn Sallūm School," examines the traditional works created by Ibn Sallūm in the Ottoman Empire. After Ibn Sallūm, Bachour goes over the names of those whose works were translated into Turkish and any additions or changes that were made during the translation; these are summarized in Figure

5 (491). Bachour states that efforts to integrate chemical medicine into humoral pathology continue in the process of translating from Arabic to Turkish. In addition, she questions the status of Arabic as a transitional language between Latin and Turkish and states that whether this situation originated from Ibn Sallūm or was a general trend of the period should be examined with further studies.

Bachour then presents the summary of her book in the Conclusion, adhering to the framework of the research question and method stated in the Introduction. The author states that no primary source could be found indicating that Ibn Sallūm had known Latin, had performed the translations, or had come from a Christian family; she indicates that these claims were attributed to him later on. This result is important because it opposes the widely accepted view in the literature that Ibn Sallūm knew Latin. Based on her analysis of several texts, she states that Ibn Sallūm had adopted the method of humoral pathology and used the concept of *cedīd/novum* [new] not as an abandonment of the ancient paradigm but to express knowledge not found in the old books. The Turkish literature on medical history states that Ibn Sallūm, who is widely claimed to have led the introduction of Paracelsus' medicine into the Ottoman Empire, had in fact selectively and pragmatically received the drug recipes that came with the new medicine without accepting the new paradigm introduced by Paracelsus. Ibn Sallūm himself experienced the recipes that came with new medicine and adopted those that had benefits; the fact that the translations stated the side effects of the new medicine as well as which ones were dangerous ones shows the pragmatic approach that had been adopted during the translations. Bachour also claims the texts from Senert, who was also eclectic, to offer a more acceptable draft for the translations and to draw attention to the texts that Paracelsus had not found anything new but that he had revived alchemy and philosophy present in the ancient sciences. These results were made only within the framework of the studied texts, and while serious reactions were shown to iatrochemistry applications in Europe, no detailed analysis that had considered the scientific life of the period was made, especially regarding its easy reception in the Ottoman Empire.[7]

Bachour's study is important not only in terms of drawing attention to the inaccuracy of the information widely accepted in the literature, but also as to

7 On this issue, see, Feza Günergun, "Convergences in and around Bursa: Sufism, Alchemy, Iatrochemistry in Turkey 1500-1750", *Entangled Itineraries: Materials, Practices, and Knowledges across Eurasia*, ed. Pamela H. Smith (Pittsburgh: University of Pittsburgh Press, 2019), 227–57.

how it shows a wider translation activity to have occurred that reflects the lively interest of the Ottoman scientific world in the medical and pharmacy literature in Europe in the mid-17th century. The book preserves the content of Bachour's dissertation and its academic style without any changes. Although the book's preservation of the doctoral dissertation text makes it difficult to read, this work is important for researchers working in the field in terms of showing a meticulous study. Bachour has summarized her study in her English article published in 2018 with various updates.[8]