



# **Introduction to treaties on Influenza** "Resaleh dar Maraz Anfeluaanza (Gerip)" within the 19th Century

Mirza Abdolhossein Khan Bin Mohammadhasan Philosoph Al-Dawlah Zanozi (1866–1941 AD) was an apprentice of the French physician and epidemiologist during the Qajar Dynasty, Dr. Joseph Désiré Tholozan (1820–1897 AD). He wrote a book, entitled "Resaleh dar Maraz Anfeluaanza (Gerip)", which was dedicated to Naser al-Din Shah Qajar (1831–1896 AD). Describing the Iranian influenza epidemic in 1890 and 1891 AD, this book is written using the method of European medical books but with the approach of Iranian traditional physicians. The present study is the correction and revision of "Resaleh dar Maraz Anfeluaanza (Gerip)" (1309 AH/1892 AD). The studies show that the treatise 'Gerip" is the first Iranian scientific text that scientifically deals with influenza. Subjects, such as causes and origin of the outbreak, types of the disease, treatment methods, and manifestation of symptoms in the affected individuals are some of the distinctive and notable points of this work.

**Key words:** Mirza Abdolhossein Khan Philosoph Al-Dawlah Zanozi, Resaleh dar Maraz Anfeluaanza (Gerip), Influenza, History of Medicine, 19th Century, Iran

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During the Qajar Dynasty (1796–1925 AD), Iran experienced the outbreak of many contagious diseases which caused high death tolls (Khirandish, and Kavoosi, 2016, p. 206). Therefore, physicians wrote various works on the causes and origins of diseases and their treatment methods. The research treatise in question is an independent monograph that was written by Philosoph Al-Dawlah Zanozi in 1890 and 1892, using the method of European books but with the style and approach of Iranian traditional physicians.

## Biography

Hakim Mirza Abdolhossein Khan Bin Mohammadhasan Philosoph Al-Dawlah Zanozi was born in 1866 AD in Tabriz. He was the son of the late renowned Allamah, Mirza Mohammadhasan Zanozi, and one of the noble physicians and innovative medical practitioners of the Azerbaijan state in the northwest of Iran (Aghighi-e Bakhshayeshi, 1999, p. 2593). Zanozi was brought up in a family with a rich scientific and cultural background, and while completing his scientific and medical education in Azerbaijan state, he benefited from the presence of Seyyed Ali Seyyed Al-Hokama and some other well-known physicians of that time and took some effective actions in both scientific and practical medicine (Philosoph Al-Dawlah Zanozi, 2004, p. 3; Mohdaszadeh, 2005, p. 315). He studied the principles of ancient sciences and medicine in Tabriz. Then, he moved to Tehran to study modern medicine and became one of the students of Dr. Joseph Désiré Tholozan, the famous French physician and epidemiologist, who was the special physician in Naser al-Din Shah's court. After studying modern medicine and gathering adequate professional knowledge, he returned to Tabriz. Zanozi was religious, virtuous, and knowledgeable in terms of ethics and conduct. He gained fame in practicing medicine and played an important role in making people trust modern medicine. Therefore, some scholars have introduced Zanozi as one of the contributors to promoting modern medicine in Tabriz (Zarafshan, 2009, p. 72; Mohdaszadeh, 2005: p. 315; Jalali Azizian, 2000, p. 451; Beigbabapour, and Adlipour, 2020, p. 108).

Hakim Mirza Abdolhossein Khan spent most of his professional time in Tabriz. Toward the end of his life, he left Tabriz, moved to Qom, and spent a few years in that town. While living in Qom, he was the head of the town's hospital or *Mariz-khaneh*. After leaving Qom, he moved to Mashhad and passed away there in December 1941 (Zarafshan, 2009, p. 75).

This renowned physician has written several medical works including 1- *Matrah al-Ainzar fi Tarajim Aitiba' al-Aesar* (In Reviewing the History of Physicians), 2- *History of Tabriz*, 3- *Al-Jadrieh* (Smallpox), 4- *Al-Jazamiyyah* (Leprosy), 5- *Euclid's Writing Margin*, 6- *Maerifat al-Sumum Naseri* (Naseri's knowledge of poisons), 7- *Miftah al-Adavieh* (The key to pharmacy), and 8- *Resaleh dar Maraz Anfeluaanza* (*Gerip*) (Zarafshan, 2009, p. 75; Jalali Azizian, 2000, p. 452).

While Hakim is mostly famous in the field of medicine and remedy, studying and analyzing the scientific texts and works of this scholar show his skill and expertise in medicine-related fields, namely pharmacology, as well as history, and mathematics.

Euclid's Writing Margin shows his knowledge of mathematics; Zanozi also wrote an independent work on the history of Tabriz, reflecting his competence and interest in theoretical sciences (Alipoor Silab, Abbasi, and Namdar, 2021, p. 106).

# The script of "Gerip"

Being published using lithography in 1309 AH (1891 AD), the script of "Resaleh dar Maraz Anfeluaanza (Gerip)" is one of the first early texts in the description of Influenza. As the writer of this work illustrates the history of grip, this disease became prevalent in Iran for the first time. According to Philosoph Al-Dawlah, influenza became prevalent in Iran in 1890 and 1891 AD / 1307 and 1309 AH during the late days of the first month and the early days of the second month of winter and affected about two-thirds of the population (Figure 1).

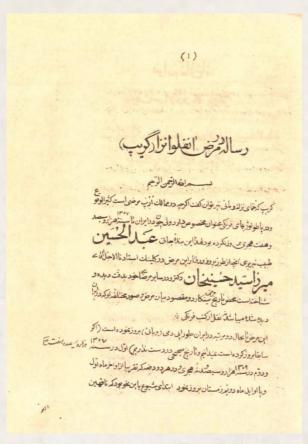


Figure 1. The treatise's manuscript (Dr. Zohalinezhad's personal archive)

In the introduction, the writer first introduces himself as "Abdolhossein Tabib Tabrizi (Tabrizi physician)" and explains his goal in writing that work. The importance of this treatise lies in the fact that it is the result of the physician's first-hand observations and clinical experiences, as this Tabrizi physician points out in the introduction: "he writes what he has learned from the manifestation and behavior of this disease in the clinic of Mirza Seyyed Hossein Khan..." (Alipoor Silab, Abbasi, and Namdar, 2021, p. 107;

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Philosoph Al-Dawlah Zanozi, 1892, p. 1). Another distinctive point is that as the writer continues to reminisce, he mentions that the description of symptoms, signs, and types of gerip is collected and told from actual patients, and the physician had no reference to the perspective and ideas of theoretical European books, The final note to this monograph is that it contains medical terms and titles of diseases in French.

# Resaleh dar Maraz Anfeluaanza (Gerip) (the Treatise on Influenza (Grip)

Bi-smi llāhi r-raḥmāni r-raḥīmi (In the name of God, the Merciful, the Compassionate)

Grip, also called, Homay Nazleh Wabayi (Influenza), is a common disease in European countries and has its specific title in French pathologies. However, since there was no outbreak of this disease in Iran up to 1307 AH (1890 AD), I, the humble writer of these lines, Abdolhossein Tabib Tabrizi, write what I have learned about the manifestation and behavior of this disease in the clinic of my master, Sir. Mirza Seyyed Hossein Khan, the doctor, as well as my patients to register the history of this disease, and the aim is to describe the type and various forms of the disease as observed in Iran, not the versions found in French books (Alipoor Silab, Abbasi, and Namdar, 2021, p. 107; Philosoph Al-Dawlah Zanozi, 1892, p. 1).

This disease has been observed twice in Iran in form of an influenza epidemic (we are not aware whether it had emerged before or not, and there is no accurate date for it): first, in 1307 AH (1890 AD), and second, in 1309 AH (1892 AD), and the outbreak of the disease happened on both occasions during the late days of the first month or the early days of the second month of winter. At the beginning of the outbreak, the individuals in convalescence from any type of disease, especially chest diseases, did not restore easily, and complete recovery was not obtained. Later, the disease gradually became prevalent among many people, approximately making up two-thirds of the population (Philosoph Al-Dawlah Zanozi, 1892, pp. 1-2).

After a minor malaise, the patient may suffer from fatigue, loss of appetite, and weakness in peripheral areas and muscles. Then, the fever would occur along with chills, Rhinitis, coughs, and headache which was sometimes worse on one side of the head, and sometimes, it would severely afflict the entire head. In some cases, the disease would lead to a sore throat and earache, while in others, there were symptoms, such as eye pain, lots of tears, constipation, and sometimes, vomiting and diarrhea. Then, the coughs would worsen, becoming constant or more frequent, followed by more and more weakness and at times by shortness of breath. In some individuals, severe rheumatic and muscle pain would happen, manifesting as pain in the chest wall in some cases, as a physical disability in some others, and severe pain in one hand and one leg in another group. These aforementioned symptoms are not manifested altogether in one single individual, but a large number of patients show some of these signs, without showing some others, in a way that in some patients, the lack of Rhinitis, the occurrence of simple non-feverish or mild-feverish catarrh, and in rare cases, rheumatic pain without fever and signs of catarrh were observed. The observation of several pregnant women showed that this disease led to diarrhea, Pre-eclampsia, and miscarriage. At present, when the disease is subsided so that it is rarely spotted, all the cases we see are intermittent, but heavy sweating occurs multiple times during the day, and in almost half the cases, diarrhea, and sometimes, cramps are observed. The temperature during the fever is highly different in various cases, as there have been patients with 38 to 41 °C, and during the entire period of the disease, the patients would experience heavy sweating, especially at night (Philosoph Al-Dawlah Zanozi, 1892, pp. 2-3).

### 1- Persistence, Behavior, and Termination of the Disease

In the case of catarrh, it would usually take three to ten and fifteen days for the dry cough to become wet, the intensity of breathing would stop, and the disease would fade away. The critical period of the disease was sometimes seen with epistaxis and rarely with diarrhea.

In patients in whom the disease was accompanied by rheumatic pain, after the disease was gone, the occurrence of these pains was regularly observed, but the convalescence in all the types of the disease lasted quite long as mostly twice or triple times longer than the period of the disease itself. The recurrence would happen in the form of troubling cough attacks after minor incontinence, and generally, the overall weakness and maladies in the respiratory system would mostly remain for a while after the disease was gone (Philosoph Al-Dawlah Zanozi, 1892, p. 3).

#### 2- Causes

The cause of the epidemic nature of this disease in 1307 and 1309 AH/ 1890 and 1891 AD in Iran is unknown, and there is doubt about its contagious character because when a large number of people would get infected with the disease, there was no way to know if the cause of disease in the most recent patients had been the transmission of the disease from the zero patient, or the patients themselves had the liability to this influenza disease without being transmitted from others. However, according to some pathologies, the sudden change in weather is regarded as a contributing factor in the occurrence of this epidemic (Philosoph Al-Dawlah Zanozi, 1892, p. 3).

#### 3- Various Forms and Complications

While having multiple forms, the simple type of this disease can be generally categorized into two forms: 1. The edematous form, and 2. The neural form. In the first type, signs of catarrh were prevalent, and in the second type, rheumatic pains were common. However, this disease, having killed a large number of people in both epidemic years, has certain complications, the most common ones include bronchitis, campylobacter, and pneumonia because of which, especially the second one, most patients passed away during the first and second year of the pandemic (Philosoph Al-Dawlah Zanozi, 1892, p. 4).

### 4- Warning

The simple type of this disease, whether in edematous or neural form, is mostly harmless, and its combined form with pneumonia is often dangerous with higher risks in the elderly. This complication of the disease is mostly fatal for the elderly, and it was

observed both as recurred and unidentified forms (Philosoph Al-Dawlah Zanozi, 1892, p. 4).

#### 5- Treatment

There is no special remedy for this disease, and its consequences should be generally treated. Permanent comfort during the entire period of the disease comes first with using mild laxatives, but in case of severe fever and pain, the use of Antipyrine is recommended, in case of severe coughs, the smoke-inducing powder is prescribed, and in case of complications of the disease, a unique treatment is suggested for each one, but Quina has led into great results in most forms and types of this disease. Due to various types of the disease, a general rule cannot be given for treatment, and it depends on the approach and opinion of a skillful physician (Philosoph Al-Dawlah Zanozi, 1892, p. 4).

It should be mentioned that despite its prevalence and history in European countries (Farang), this disease was not observed in Iran up to 1307 AH, and while Iranian physicians had already studied the details of this disease in translated European books, they had not witnessed it firsthand; hence, this disease is not named in Iranian books. That's why there is no trace of it in Persian literature. This disease is sometimes mistaken for catarrh and complicated cold which are mentioned in ancient medicine books; however, they are unlikely to be the same. However, the grip is mostly a complicated disease that involves catarrh, respiratory tract, nose, and eyes but does not resemble any of them on its own. From the way cold and catarrh are described in ancient medical books, it can be learned that the old grip did not occur in these countries, and ancient physicians did not witness this disease. However, in his book, Canon, Avicenna mentioned some of the symptoms and complications of grip, such as vomiting, diarrhea, and catarrh. He states, "catarrh sometimes reaches throat, lungs, esophagus, and stomach, it may cause ulcer and result in Al-Shahwah Al-Kalbiyyah, In an idiomatic sense: Bulimia nervosa or Anorexia nervosa. It may involve the nerves, and sometimes, cause suffocation, pneumonia, Pleurisy, and especially, tuberculosis" (Philosoph Al-Dawlah Zanozi, 1892, pp. 4-5, Avicenna, 2005, p. 413) (Figure 2).

However, all these statements do not prove that grip was known in the past because none of the Iranian books has documented the breakout of catarrh as an epidemic with specific symptoms of our present grip. However, some historians state that the common cold had been prevalent in Iran and killed many people.

#### Conclusion

Resaleh dar Maraz Anfeluaanza (Gerip) is written by Mirza Abdolhossein Khan Bin Mohammadhasan Philosoph Al-Dawlah Zanozi (1866–1941 AD), one of the most prominent physicians during the Qajar Dynasty. He wrote the first Farsi monograph on the influenza epidemic in 1307 and 1309 AH (1890 and 1891 AD) in eloquent Farsi in 5 pages and listed the treatment methods for the disease. The physician was not likely to have access to the perspective and ideas of theoretical European books. While this work is comparable with European medical treatises, it can be regarded as a book with the utmost authenticity of Iranian medicine in terms of scientific, phonetic, and writing.





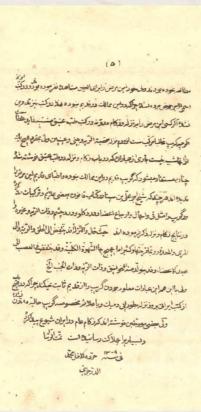


Figure 2. The last page of the treatise's manuscript (Dr. Zohalinezhad's personal archive)

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#### **Conflict of Interest**

None.

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