

## Hakim Jorjani

(1042-1137)

*Zinn-ol-Abedin Seyed Esmail Jorjani, known as Hakim Jorjani, was born in 1042 A.D in Jorjan, a city located in north-eastern Iran near the Caspian Sea. Jorjan, now called Gorgan, was an important city and also the capital of 'Kharazmshahyan' kingdom.*

*Hakim Jorjani was a physician serving in the court of Kharazm Shah Qutb al-Din Muhammad ibn Nushtikin, the Governor of the Persian Province of Kharazm. Since Hakim Jorjani lived in the kingdom of Kharazmshahian, he named his comprehensive textbook of medicine "Zakhireh kharazmshahi" (The treasure of Kharazm Shah). (1,3)*

*After Islam was brought to Iran, the majority of Iranian scientific books were written in Arabic. However, Hakim Jorjani wrote the Zakhireh Kharazmshahi in Farsi. This book is considered the oldest medical encyclopedia written in Farsi which became the primary reference for Iranian physicians. This book greatly influenced the Iranian medicine and was translated into Hebrew, Urdu and Turkish languages (1).*

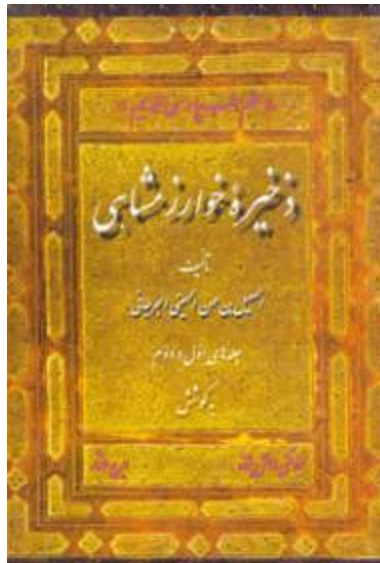
*Zakhireh Kharazmshahi has been written in ten volumes and a preface.*

**-Preface:** *Epidemiology of diseases and an explanation on the climate and geographical location of the place where he resided.*

- 1. First volume:** *Physiology and anatomical description of human body. On the subject of the anatomy of the optic nerve, he says that this nerve at its periphery goes to the ipsilateral rather than the contralateral eye.*
- 2. Second volume:** *General pathophysiology. A chapter is assigned to the description of different types of pulses. There is another chapter on causes of death.*
- 3. Third volume:** *Hygiene and nutrition with separate chapters on childhood diseases, illnesses of other age groups, diseases caused by aging and travel diseases.*
- 4. Fourth volume:** *Differential diagnoses of diseases.*
- 5. Fifth volume:** *Fever and its classification. He also described three body fluid compartments: intravascular, interstitial and a third compartment within the tissues (intracorporeal).*
- 6. Sixth volume:** *Treatments. At that time, this volume was the most useful one for physicians.*
- 7. Seventh volume:** *Infectious diseases. A wide variety of skin infections and classification of ulcers are amongst the contents.*
- 8. Eighth volume:** *How to adorn the appearance (aesthetics).*
- 9. Ninth volume:** *Toxicology.*
- 10. Tenth volume:** *Pharmacology.*

*Jorjani was the first to mention the association between goiter and exophthalmia. Zakhireh also has a separate chapter that discusses beauty and healthy skin in great detail. Moreover, Jorjani also wrote a very informative chapter on tumors. He divided tumoral lesions into soft (Saghirus) and hard (Saratan, the Farsi term for cancer) lesions. He described the diagnosis*

of cancer as being very difficult in early stages and usually untreatable when diagnosed. He suggested that cancer should be completely removed along with its associated tissues. He gave an example and explained the resection of a breast cancer in great details. (1,2)



*Khof Alaei, Aghraz-o-Tebieh, Mabahe Alaei, and Yadgar are other text books written by Jorjani. Aghraz-o-Tebbieh and Khof Alaei are two synopses of this medical encyclopedia and are amongst the first manuals in medical history. These books were written in short paper formats so that physicians and medical students could always keep them handy when travelling.*

*Later, Hakim Jorjani moved to Merv, the capital of Sultan Sanjar ibn Malikshah kingdom. He died there in 1137 AD (1). His scientific influence on Iranian medicine and culture should not be underrated.*

## **REFERENCES**

1. Elgood C. *A Medical History of Persia and the Eastern Caliphate*. London: Cambridge University Press; 1952.
2. Zitouna M, Mouaffak F, Mansour A, Labbene R, et al. Ulcerations and their classification by Ismael Jorjani. *Tunis Med* 2003;81(6):437-9.
3. Elgood C. *A Safavid Medical Practice/The Practice of Medicine, Surgery and Gynaecology in Persia Between 1500 AD and 1750 AD*. London: Luzac; 1970.