Lesson Objective: Students will learn how illustrations provided a medium for the transmission of scientific observations by examining *Sharh al-Badan (Tashrihi Mansuri)*

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Studies on Persianate Manuscripts, Arts, and Literature
Illustrations: Courtesy of National Library of Medicine, NIH, Timeline: Courtesy of the source. Source: Malak A, Alghamdi, Janine M. Ziermann, and Rui Diogo, An Untold Story: The Important Contributions of Muslim Scholars for the Understanding of Human Anatomy. Department of Anatomy, Howard University College of Medicine, Washington DC, 2017.

Sharh al-Badan (Tashrihi Mansuri)

Mansur ibn Elyas Shirazi منصور ابن الیاس شیرازی (d.1422 AD) was a Persian anatomist and physician from the city of Shiraz in the central province of Fars. His book, *Tashrihi badan insan (Anatomy of* the *Human Body),* تشـــریح بدن انســـان known as *Tashrihi Mansuri* تشـــریح منصـــوری, comprises the first colored anatomical atlas of the human body. *Tashrihi Mansuri* was written in Persian around 1386 and includes a prologue and five articles with both Arabic and Persian terms. Six full-length colored figures depicted in the *Tashrihi Mansuri* are the major contributions of Mansur's Anatomy.

The prologue, like many other manuscripts of the time, includes an invocation worshipping of God and praising him, followed by the name of the author as Mansur bin Mohammad bin Ahmad. The first article (chapter) considers the anatomy of the skeletal system and the number of bones in the body. The second one explains the types of nerves and their branches routed from the brain and spinal cord. It includes cranial, spinal, and optic nerves. The third chapter presents the muscular system, the fourth one concerns the arteries and veins, and finally, the last chapter examines the development of the embryo. The book is dedicated to Prince Pir Mohammad Bahador, the grandson of Timur (Tamerlane) and the ruler of Fars from 1394 to 1409.

What makes the manuscript unique is the illustrations of the skeleton, nerves, veins, arteries, muscular, and the pregnant woman with the fetus. The color illustration of the gravid uterus is among the first illustration of a pregnant female body in medical manuscripts. While there are no anatomical paintings of the human body preserved from the Islamic world before Mansur and his illustrations were used in many Persian and Arabic manuscripts after Mansur, many western historians believe that except for the figure of the pregnant woman, which was possibly a contribution by Mansur himself, the other illustrations are similar to early Latin sets of anatomical diagrams. Nevertheless, the fact that all these illustrations accompany one another in one place in a series of full-length figures remains the importance of this manuscript as a source of the compilation of the knowledge of the time. In comparison with the anatomical knowledge of today, despite deficits, Mansur's *Tashrihi badan insan* is a complete atlas of the human body of his era.

For centuries after Mansur, illustrations from his *Tashrihi badan insan* were copied and used in medical texts from Persia to Europe. His paintings found their way into the lecture halls and libraries of newly established European medical schools of the fourteenth century. Mansur's work, as a result, enriched the practice of surgery in the early medical schools at Salerno, Bologna, Pavia, Oxford, and Montpellier.

https://www.nlm.nih.gov/hmd/arabic/p19.html
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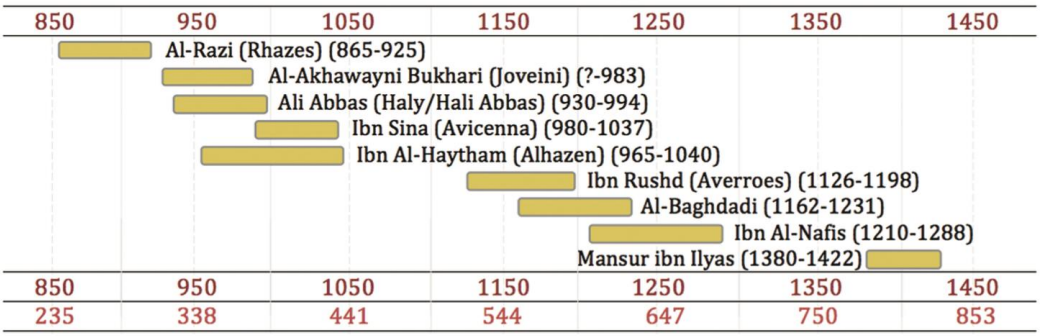
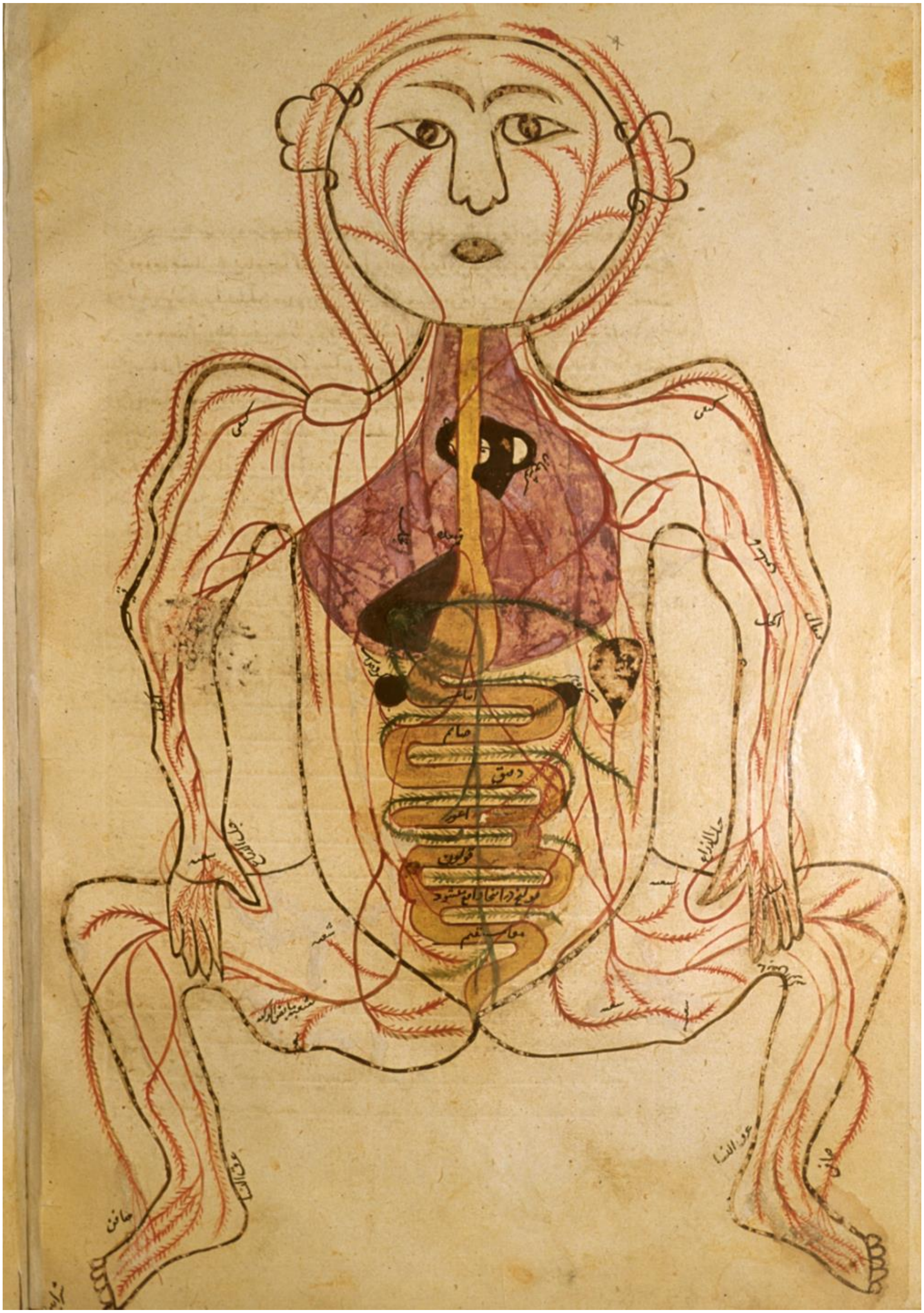
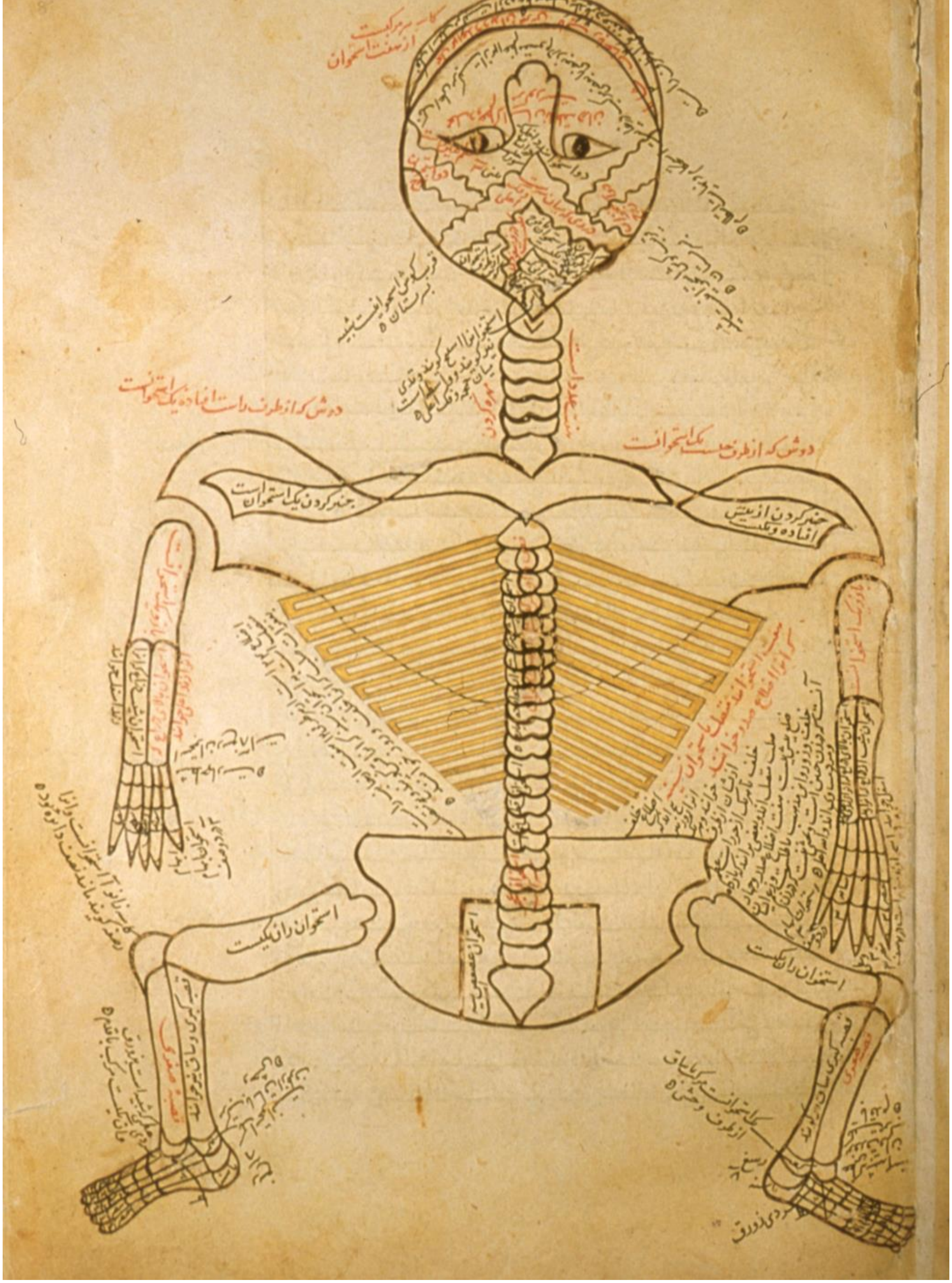


Fig. 1. Timeline of Muslim scholars from 7th–13th century AD. The lower row shows the years in *Hijri*, that is, after the Islamic calendar.





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In groups of four, choose one of the human body systems, draw a painting and explain the body system in class. You can choose from the cardiovascular system, digestive system, endocrine system, integumentary system, immune system, muscular system, lymphatic system, nervous system, the respiratory system, urinary system, and reproductive system.

Terms:

Anatomy

Cranial nerves

Spinal nerves

Optic nerves

Anatomical diagrams

Invocation