

WHO DISCOVERED THE CIRCULATION OF BLOOD?

Chinese Model

The Yellow Emperor's Manual says

The function of the tract-channel system of the human body is to promote a normal passage [circulation] of the blood and the ch'i, so that the vital essentials derived from man's food can nourish the yin and yang viscera, sustain the muscles, sinews and bones, and lubricate the joints.

What we call the vascular system is like dykes and retaining walls forming a circle of tunnels which control the path that is traversed by blood so that it cannot escape or find anywhere to leak away.

2nd century BCE

Roman Model

The arteries have no sensation, for they even are without blood, nor do they all contain the breath of life; and when they are cut only the part of the body concerned is paralyzed...the veins spread underneath the whole skin, finally ending in very thin threads, and they narrow down into such an extremely minute size that the blood cannot pass through them nor can anything else but the moisture passing out from the blood in innumerable small drops which is called sweat.

Pliny the Elder 23 CE - 79CE

The Arab Model

The blood from the right chamber of the heart must arrive at the left chamber, but there is no direct pathway between them. The thick septum of the heart is not perforated and does not have visible pores as some people thought or invisible pores as Galen thought. The blood from the right chamber must flow through the vena arteriosa (pulmonary artery) to the lungs, spread through its substance, be mingled with air, pass through the arteria venosa (Pulmonary vein) to reach the left chamber of the heart...

... the nourishment of the heart is from the blood that goes through the vessels that permeate the body of the heart ...

Ibn al-Nafis 13th CE

1. Which of these scientists do you think used methods which we would recognise today as scientific methods?
2. How do you think the methods used by the scientists affected the accuracy of their model of the circulation system?
3. In each case, why do you think these scientific ideas were not more widely known?