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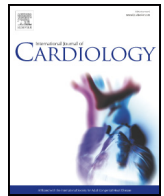
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## International Journal of Cardiology

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## Correspondence

Q1 Q2 **Ibn Nafis and the early description of the role of coronary arteries in blood supply of the heart**

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Dear Editor,

Ibn Nafis, a Syrian surgeon and physician was born in *Al-Qarsh* near Damascus in 1210 AD (Fig. 1). He studied medicine in his homeland under supervision of Ibn-Essuri and then went to Cairo. He found *al-Mansauri* hospital and also became dean of the Natural School of *al-Salahi* hospital, a position he held until he died in 1288 AD. He wrote about twenty medical books during his scientific life [1,2].

In the mid-20th century when his book, "*Sharh-e Tashrieh-e Qanun* [Commentary on Anatomy of Canon]" was discovered in the archives of the Prussian State Library in Berlin in 1924, he became famous because it was believed he was the originator of pulmonary circulation [3,4]. Although nowadays we know he was not the originator of this theory and it was presented by his predecessors like Akhawayni (?–983 AD) [5] and rooted in ancient Persian medicine [6], he had other novel theories in cardiology which were unique in that time [7].

Ibn Nafis doubt Avicenna's theories on blood supplying of the heart in his "Commentary on Anatomy of Canon" book. He wrote in this book: "*His [Avicenna's] statement that the blood that is in the right side nourishes the heart is not true at all, for nourishment of the heart is actually from the blood that goes through the vessels that permeate the body of the heart*" [8]. It is the first reported document on the role of coronary arteries in the history of cardiology.

In medieval Persia, the paradigm of medicine was based on humoral theory (a holistic paradigm). In this view, anatomy was not too important and health and disease were belonging to balance and

imbalance of four humors. Therefore, most of physicians like Avicenna 45 (980–1032) did not attention to this field and mostly followed Galen 46 and copied his anatomical parts including his mistakes (like three 47 ventricle in heart, existing pores in the heart septum, etc) in their 48 books. Some others like Akhawayni and Haly Abbas (949–982 AD) 49 accessed ancient Persian medical texts and therefore in some cases 50 used their right theories (in contrast of false Greek theories) like 51



Fig. 1. An imaginary picture of Ibn Nafis when autopsied.

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52 pulmonary circulation [6] and the role of uterus contractions in normal  
 53 vaginal delivery [9]. Only few physicians like Mansur (1380–1422 AD)  
 54 [10] and Ibn Nafis had great attentions to anatomy and had more new  
 55 innovations and findings in this field than others.

#### 56 Conflict of interest

57 The authors report no relationships that could be construed as a  
 Q4 58 conflict of interest.

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