

## Realdo Colombo in the fifth centenary of his birth

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The date of birth of Realdo Colombo is still uncertain. However, 1516 is conventionally credited as the year where he was born in Cremona. Colombo's life can be divided into three periods, according to the cities where he worked: Padua, Pisa and Rome. A talented anatomist, in Padua Colombo became assistant of Andreas Vesalius in 1541. In 1545 he moved to Pisa at the behest of the Grand Duke Cosimo I de' Medici. Finally, he was invited in Rome by Pope Paul III and became the physician of many important patients, including Michelangelo Buonarroti. He also performed the autopsy on the body of Saint Ignatius of Loyola. In his unique masterpiece, *De re anatomica*, consisting of 15 books, Colombo reported original observations. He hoped to have a text illustrated by Michelangelo that would have competed with the *fabrica* of Vesalius, but that purpose did not realize. Indeed, the unique engraving of the volume, published posthumously in 1559, is the frontispiece. The most important anatomical discovery attributed to Colombo is the original description of the pulmonary circulation, based on hundreds of dissections and vivisections. The Galen's long-standing doctrine of the blood circulation from the right ventricle to the left ventricle through invisible pores of the interventricular septum was definitively rejected. Although two other figures had already described the pulmonary circulation – the thirteenth century Arabic physician Ibn al-Nafis, in the *Commentary on Anatomy in Avicenna's Canon*, and the Spanish philosopher Michael Servetus, in the theological book *Christianismi restitutio* – Colombo seems to have arrived at his conclusions independently. He also understood the function of the cardiac valves. Colombo's book had a profound effect on William Harvey, when he prepared his lectures on anatomy for the College of Physicians of London, and was determinant for the publication of his description of the blood circulation in *De motu cordis* (1628). Other anatomical observations are attributed to Colombo. He corrected previous misconceptions, demonstrating that the right kidney is lower than the left, and showing that the lens is in the anterior chamber of the eye. He recognized anatomical variants, such as the presence of palmaris longus muscle, and described congenital malformations, such as the horseshoe kidney. He also seems to have coined the term "placenta" and claimed to have been the first to describe the clitoris and its function.

### Keywords

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Michael Servetus; Ibn al-Nafis; pulmonary circulation.