William Harvey (1578 –1657) was the first person to describe circulation of the blood. He was born in Folkestone, of which his father was the mayor.

After entering the King’s College in Canterbury (where he studied for five years) he went to Cambridge.

Graduating from there he went to study in Padua after going through France and Italy.

There he gained his Doctorate in Medicine in 1602. After this he returned to England and obtained his Doctorate from Cambridge.

After being elected a Fellow of the college of Physicians he joined the St. Bartholomew’s Hospital, ultimately becoming the Physician-in-Charge there.

In 1615 he was appointed to be the Lumleian lecturer. In 1618 he was appointed as ‘Physician Extraordinary’ to King James I.

In 1628 he published his magnum opus, “De Motu Cordis” (The Motion of the Heart and Blood) a 72 paged book describing the circulation of the blood.

In this treatise, after describing the heart in detail he described the pulsation of the arteries after every ventricular systole of the heart while also noting that the right ventricle filled the pulmonary artery. At this time he was not aware of the existence of capillaries as there was no microscope available then. These observations were made in different species of fishes and animals like pigeons and chickens.

He had observed the presence of the ductus arteriosus and its function. He also estimated the amount of blood pumped at each systole and the rate at which the heart beat. He estimated that the capacity of the heart was 1.5 imperial fluid ounces (43 ml), and that every time the heart pumps, 1/8 of that blood is expelled.

By further experimenting on serpents and different types of fishes he observed that if the veins were tied the heart would become empty and if the arteries were tied the organs would swell up.

Becoming bolder he tried the same experiments on human being. He noticed that if the upper arm was tied with a tight ligature the arm below the ligature was cool and became pale while above the ligature it was red and warm and swelled.

Slightly loosening the ligature resulted in the flowing of blood into the arteries and hence, the lower part of the arm became warmer and even the veins filled up. He noticed the bumps caused by the venous valves. He further proved that the veins could make the blood flow only upwards. If he tried pushing it down, the blood would not flow down. This proved the one-way passage of the blood. However, he observed that the veins in the neck only allowed the passage of blood down to the heart. He also concluded that the valves in the veins were important in allowing the blood to flow only in one direction.

However, though he did conceive that the blood from the arteries could find its way to the veins he was not able to visualise the presence of capillaries.

His findings caused a lot of controversy as the teachings of Galen held a lot of sway then. Galen thought that during dilation the arteries sucked in air, while during their contraction they discharged vapours through pores in the flesh and skin.

At the age of 52 he accompanied the Duke of Lennox on a tour of Europe. He was devastated at seeing the ravages of the Mantuan war and of the plague.

King Charles I appointed him “Physician Ordinary” and he held this position till his death.

In 1642 the king appointed him as “Doctor of Physic” in Oxford.

He died of cerebral haemorrhage on 3rd June 1657 at the age of 79 and was buried in Hempstead, Essex.

After his death the town of Ashford built the William Harvey Hospital in his memory.