

Chapter 16

In Vivo Biofluid Mechanics

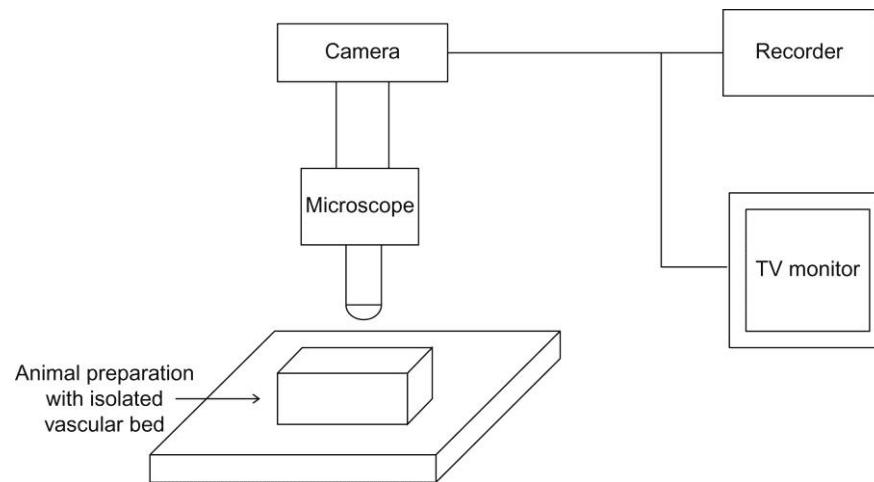


Figure 16.1 Schematic of a typical intravital microscopy system. The key parameters are the microscope, which is coupled to a live-feed imaging system, and a real-time data acquisition component. Intravital microscopy can be used to monitor disease progression, therapeutic efficacy, clearance, and distribution of blood cells within the microvasculature.

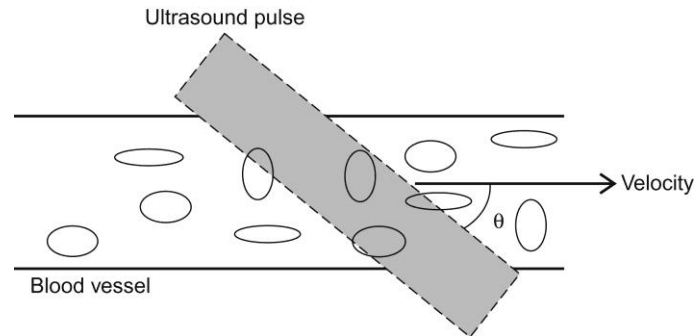


Figure 16.2 Doppler ultrasound wave intersecting with a blood vessel. Based on the apparent shift of the ultrasound frequency, one can obtain information about the blood velocity. This shift occurs due to the reflection of sound waves after coming into contact with blood particles.