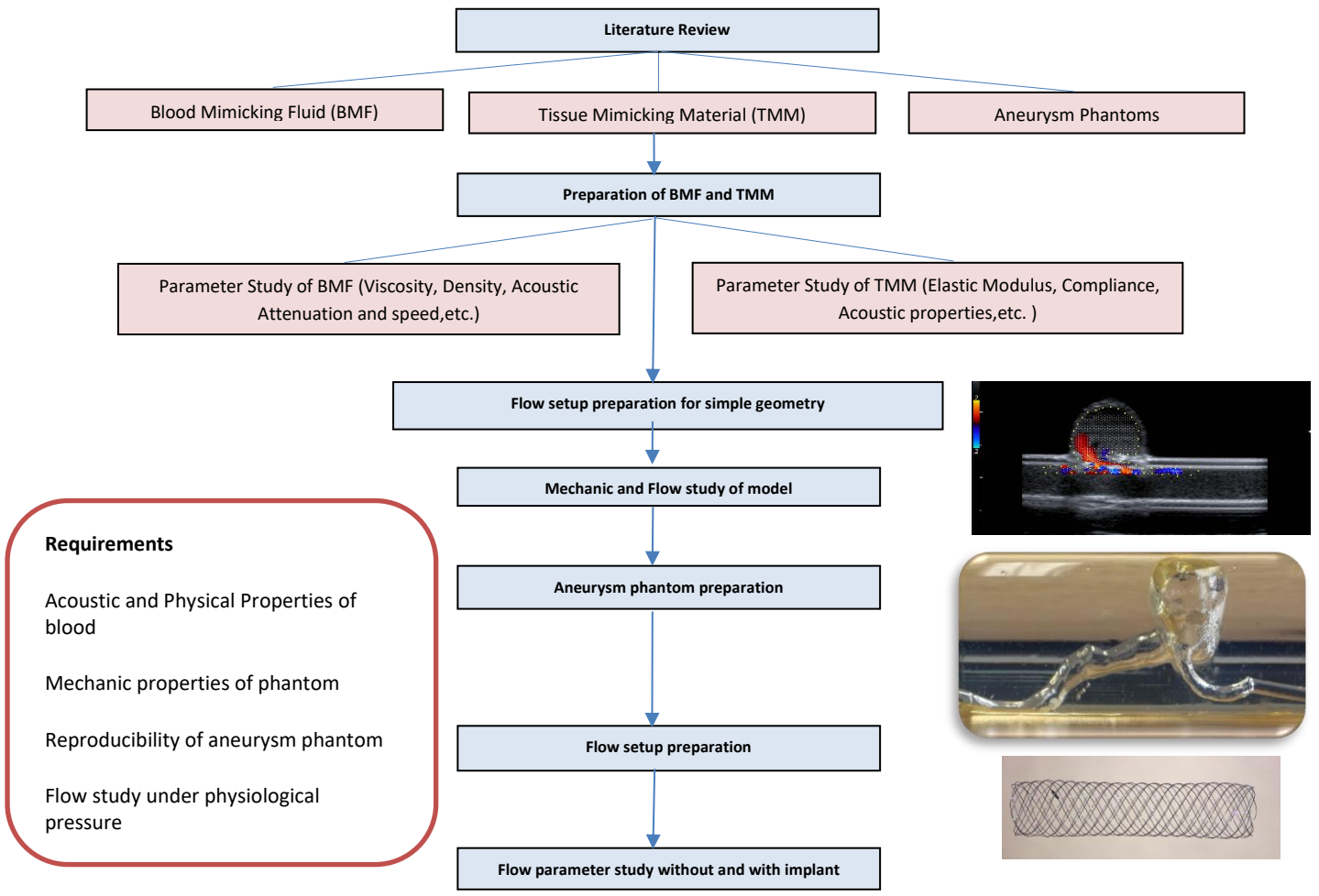




Development of blood substitute and vessel phantom for ultrasound flow study of aneurysm

Background:

In the recent years, different experimental techniques such as particle image velocimetry (PIV) and laser doppler velocimetry have been used to study the fluid dynamic in treated and untreated in-vitro aneurysm models. The limitations of these techniques, including the need for using transparent vessel model and blood substitutes, lead the fluid dynamic investigations toward using the clinically approved ultrasound system. A new ultrasound device available at BMT allows for investigation of flow parameters such as flow vector mapping (VFM) and wall shear stress. Material choice, model construction and characterization, parameter setting and finally investigation of flow within an in-vitro aneurysm phantom with and without implant is in the scope of this study.



Start:
Immediately

Supervisor:
M.Sc. Ashkan Shiravand