NON-NEWTONIAN EFFECTS IN BLOOD FLOW SIMULATIONS OF CORONARY ARTERIAL FLOW

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HIGHLIGHTS

1. Evaluated the non-Newtonian viscoplastic effects of blood rheology to simulations of coronary arterial blood flow by comparing the predictions to the Casson against the Newtonian model.

2. Demonstrated that the nonNewtonian effects can alter as much as 50% the Newtonian results in arterial blood flow.

3. Presented a new, more computationally efficient, implementation of the outer boundary conditions in arterial blood flow.