

**Blood perfusion flow of an electro-kinetic fluid through a porous medium
with viscous dissipation**

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Abstract

In this work, we considered a mathematical model of an electro-kinetic fluid flow through a porous medium with blood perfusion and viscous dissipation. The fluid is assumed to poses temperature-dependent variable viscosity and thermal conductivity. The nonlinear governing partial differential equations were obtained and solved numerically using Garlekin weighted residue method coupled with fourth order Runge-Kutta technique. The results obtained were presented graphically and discussed.