**ABSTRACT**

In the present analysis, we study the two-dimensional effects on unsteady MHD free convection and mass transfer flow past through a porous medium in a slip regime with chemical reaction. A magnetic field of uniform strength is assumed to be applied transversely to the direction of the main flow. Perturbation technique is applied to transform the non-linear coupled governing partial differential equations in dimensionless form into a system of ordinary differential equations. The equations are solved analytically and the solutions for the velocity, temperature and concentration fields are obtained. The effects of various flow parameters on velocity, temperature and concentration fields are presented graphically