The present study was designed to investigate diabetes induced germ cell apoptosis in testis and its protection by treatment with hexane fraction of hydro-methanolic extract of root of *Musa paradisiaca* and leaf of *Coccinia indica* in composite manner. Testicular oxidative stress injury was reflected by diminution in the activities of antioxidant enzymes such as catalase, peroxidase, superoxide dismutase and glutathione-s-transferase along with elevation in levels of conjugated diene and thiobarbituric acid reactive substances in diabetic condition. Serum testosterone and insulin levels were decreased in association with elevation in apoptosis of pancreatic islet cells in diabetic rats. Giant cells number along with elevation in the number of apoptotic cells were noted in seminiferous tubules in diabetic model animals. Significant improvements in the levels of blood glucose, serum insulin and testosterone and testicular oxidative stress parameters were noted versus control after treatment of said fraction at a dose of 2 mg (1:3)/0.2 ml olive oil per 100 g body weight per day for 45 days to diabetic rats. Numbers of giant cells in seminiferous tubules, apoptotic germ cells and apoptotic pancreatic islet cells were decreased significantly in fraction treated diabetic group versus control. From UV-spectroscopic and TLC studies in connection with phytochemical screening of the said fraction, phenol, flavonoid and alkaloid types of compound were found. From these results it may be concluded that the active ingredient(s) present in hexane fraction of root of *Musa paradisiaca* and leaf of *Coccinia indica* have the potential to correct diabetes-induced testicular germ cell apoptosis.
Furthermore, diabetes increases apoptosis in testicular germ cells either in mice (Sainio-Pollanen et al., 1997; Cai et al., 2000). In recent years, there has been renewed interest in plant medicine for the treatment against different diseases (Rao et al., 2003; Ladeji et al., 2003). Isolated studies screened various plants having “folk medicine reputation” by biochemical test for this antidiabetogenic effect (Vats et al., 2002). Streptozotocin-induced diabetic effects on spermatogenesis with proliferative cell nuclear antigen immunostaining of adult rat testis. Fertil. Steril., 80: 828-831.