**THE STUDY OF INVITRO CARDIOVASCULAR EFFECTS OF CRATAEGUS ARONIA IN NORMOTENSIVE RATS**

M.S. Shekha1, **O.A.M. Al-Habbib2**

1Salahaddin University, Erbil, Kurdistan Region of Iraq, 2Zaxo University, Duhok, Kurdistan Region of Iraq, Iraq

Crataegus azarolous var. aronia is one of the most important medicinal plants used widely in folk medicine for its cardiotonic, vasorelaxant and hypotensive effect. The present work was undertaken to study the physiological effects of butanol fraction on isolated aorta and langendorff perfused heart. In thoracic aorta, BF produced more potent inhibitory effect on PE- than KCl-induced contractions, with log IC50’s of -3.432 mg/mL and - 1.805 mg/mL along with E Max of 50.96% and 22.15%, respectively. Butanol fraction significantly relaxed aorta with intact endothelium contracted with phenylephrine (10-6 M) in a concentration-dependent manner, but the effect was much milder in aorta without endothelium (with Log IC50 -3.077 and -2.739 along with E Max of 56.53 % and 15 %, respectively). In aortic rings with intact endothelium preincubated with either L-nitro arginine methyl ester or Indomethacin, BF markedly attenuated the concentration-dependent relaxation curves shifted then to the right with Log IC50 -2.093 and -0.03463 respectively. The E Max values for Preincubation of L-NAME and Indomethacin were 5.42 % and 10.5 %, respectively. Preincubation of intact aorta with either Tetraethylammonium 10 uM or Glibenclamide 10 uM markedly attenuated the concentration-relaxation curves to BF with Log IC50 0.5910 and 2.046 respectively and E Max values were 16.38 % and 14.97 %, respectively. Butanol fractions (0.03 and 0.3 mg/ml), significantly (P<0.05) decreased HR from 212.2±19.66 to 144.8±20.25, 140.4±16.72 and 126.4±19.66 respectively. Butanol fraction at a concentration of 0.3 mg/ml, significantly (P<0.001) decreased LVSP from 147±17.33 to 78.86±29.87and LVDP from 131.7±16.31 to 65.37±28.6, respectively.