# Summary and Conclusion

Hibiscus Sabdariffa has many pharmacological effects. This study was designed to compare the hibiscus sabdariffa flower extract (HS) with atorvastatin regarding to their effects on lipid profile, and also to compare the HS with enalapril regarding to their effects on arterial blood pressure in vivo. This work was done also to study HS effects on isolated perfused rabbit's heart, isolated perfused rabbit's aortic spiral strip, and on isolated perfused rabbit's jejunum in vitro.

The induction of hypercholesterolemia was done by high cholesterol diet (2 gm/kg cholesterol dissolved in corn oil) for two months. At the end of the study period, the rats were subjected to measuring total cholesterol, LDL, HDL and triglycrides.

It was found that HS and atorvastatin produced a significant reduction in total cholesterol, LDL,triglycrides and significant increase of HDL in hypercholesterolemic rats.

As regard studying the effect on blood pressure, a model of hypertension was done by renal artery ligation of left kidney for four weeks. rats were divided into four equal groups: Control group, hypertensive group, hypertensive group treated with HS (250 mg/kg) and hypertensive group treated with enalapril (30 mg/kg orally for 6

weeks).

At the end of the study period, the rats were subjected to measuring SBP and MBP.

It was found that HS had the same effect as enalapril which produced significant reduction of SBP and MBP.

In vitro study, It was found that HS produced significant decrease of the force of contraction of the isolated perfused rabbit's heart which was mediated by muscurinic receptors.

Also, HS produced significant inhibitory effect on the isolated rabbit's aortic spiral strip. This action is not abolished by atropine.

On the isolated rabbit's jejunum, HS produced significant inhibition of spontaneous rhythmic contraction of jejunum and this effect was not mediated through adrenergic receptors.

In conclusion, HS is effective and may be recommended for treatment of hypercholesterolemia, hypertension and prophylaxis of cardiovascular disease due to its antihypertensive antihyperlipidemic effects and more investigations need to be done to confirm these results.