**Title:** The effect of some anti-glycating agents on the early, intermediates and advanced glycated end products of albumin

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**Abstract:**

Aim/Objectives. Glycated albumin (g-Alb) is one of the most important Amadori products. Elevated levels of g-Alb, which is determined by the fructose amine test, cause permanent damage connected with the metabolic disorders observed in diabetes mellitus, such as retinopathy, nephropathy, neuropathy and coronary artery disease. In this study, we compared the effect of crocin (Crt), glycine (Gly) and N-acetyl cysteine (NAC) on the glycation of albumin and formation of glyoxal (GO), methylglyoxal (MG), pentosidine and advanced glycation end product (AGEs).

**Methods.** Albumin was extracted from rat serum using TCA and ethanol, using the method of Ohkawara et al.; then it was incubated with glucose and each of the named ligands. After three weeks, GO and MG were determined by HPLC; and after three months the AGES and pentosidine were determined by fluorometry and HPLC, respectively.

**Results.** Formation of the mentioned components was shown in the presence of Glc alone; however, Crt, Gly and NAC inhibited the formation of these products with various degrees.

**Conclusion.** Various inhibitory effects of the named ligands on the Alb glycation and the formation of glycated products at different stages were observed. Thus the mechanism of their inhibitory effect is different.