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Research article

Study of anticataract activity of *Sesbania grandiflora Linn & Mentha arvensis Linn.*

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Abstract

Cataract - opacification of the lens - is closely related to Diabetes, Unhealthy diet, Aging as one of its major late complications. This study deals with three molecular mechanisms that may be involved in the development of cataract, non-enzymatic glycation of eye lens proteins, oxidative stress, and activated polyol pathway in glucose disposition. The natural nutrients and antioxidants such as *Sesbania grandiflora Linn & Mentha arvensis Linn.* was subjected to prevent cataract formation in vitro on glucose induced cataract model. The goat lenses were incubated in artificial aqueous humor containing 55 mM glucose with *Sesbania grandiflora Linn & Mentha arvensis Linn* extracts separately at different dose levels (75 mg/ml, 150 mg/ml and 250 mg/ml) and (250 mg/ml, 500 mg/ml and 750 mg/ml) at room temperature for 72 hrs. Evaluation was done by using biochemical parameters like Estimation of Total Protein Content, Estimation of Malondialdehyde (MDA) Level, Estimation of Glutathione (GSH) Level, Estimation of Lipid Peroxidase Level. The glucose induced opacification of goat lens was also studied as a part of visual evaluation. The data suggest that ethanolic extract of *Sesbania grandiflora Linn* (EESG), *Mentha arvensis Linn* (EEMA) and standard drug (Catlon) are able to significantly retard experimental glucose induced cataractogenesis.

Key words: Cataractogenesis, MDA, GSH and Protein estimation, EESG, EEMA, Polyol pathway.

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