

**ASSESSMENT OF THE ALLERGENICITY OF PROTEIN EXTRACT FROM
TRANSGENIC BRINJAL (*Solanum melongena L.*) RELATIVE TO THOSE
OF CONVENTIONAL BRINJAL, AS TESTED IN BROWN NORWAY RATS**

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SUMMARY RESULTS

This study was conducted to assess the allergenicity of protein extracts of transgenic brinjal (*Solanum melongena L.*) in relation with conventional brinjal. Six to seven week old Brown Norway rats were randomly selected and assigned to 3 groups: G1 (vehicle control group), G2 (500 mg/kg of brinjal powder) and G3 (1000 mg/kg of brinjal powder). The animals of G2 and G3 group were sensitised with brinjal powder consisting of 4 non-transgenic varieties of brinjal (MHB-4 Non-Bt, MHB-10 Non-Bt, Bharata baigan and Jalna local) in equal proportions. The brinjal powder was made as suspension using refined groundnut oil (RGO) and administered as gavage consecutively for 62 days. Similarly the vehicle (RGO) was administered to G1 group. The animals were observed daily for signs of toxicity and pre-terminal deaths, weekly body weights and food consumption.

There were no clinical signs of toxicity and all the animals gained body weight. After 62 days of administration, 8 animals from each group were selected and challenged by intradermal injections of protein extracts from transgenic brinjal (MHB-10 Bt), 4 non-transgenic brinjal hybrid – MHB-4 Non-Bt, MHB-10 Non-Bt, Bharata baigan , Jalna local and rice. Systemic injection of Evan's blue (1% w/v) by intracardiac route provided an area of extravasation at the dermal challenge sites as an indicator of immune or inflammatory response.

Based on the statistical analysis of the blue spots and direct observation, the allergenicity and inflammatory characteristics of transgenic brinjal were similar to non-transgenic brinjal varieties. Based on this data, it is concluded that there is no biological difference between the allergenicity of the brinjal from transgenic and the 4 non-transgenic brinjal hybrids.