

(II) enhanced the activity of the compounds *in vitro* as well as *in vivo* (except four IIb, IIc, IIe and IIk). Of these compounds, those with chlorine at position 2- of the benzylidene nucleus are significantly more active than compounds with chlorine atom at position 4-. Presence of nitro group at position 4- also appears to cause significant inhibition of the virus. Presence of bromine atoms at positions 6',8'- of quinazolin moiety also caused an increase in the activity both *in vivo* as well as *in vitro*. Compounds IIIg and IIIl showed significant inhibitions of 65%, 61% *in vivo* and 88%, 85% *in vitro* respectively.

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1. Bahadur, S., Srivastava, N. and Mukherji, S., *Curr. Sci.*, 1983, **52**, 910.
2. Mukherji, D. D., Shukla, S. K., Verma, H. N. and Awasthi, L. P., *Acta Pharm. Jugosl.*, 1981, **31**, 151.
3. Verma, H. N. and Awasthi, L. P., *Curr. Sci.*, 1976, **45**, 642.
4. Snedecor, G. W., *Statistical methods* (APP Ltd Bombay), 1961.

NEWS

FOOD TOXINS

A common consumer may feel that all natural foods are safe and ideal for health. But the fact remains that some of them are not all that harmless as they are generally believed to be. They contain chemical substances called food toxins which create physiological disorder in the body, sometimes even leading to death. For example, fresh cabbage, known so much for its Vitamin C content, contains a goitrogenic substance. Lathyras (or *Khesari dal*), grown extensively in Madhya Pradesh, Bihar and UP and consumed mostly by the poorer sections of society, contains a powerful toxin which causes paralysis in the lower legs. Several varieties of fresh water fish contain thiaminase—a compound which destroys an essential water-soluble vitamin, thiamine, whose absence causes a dreadful disease called beri-beri.

Many food materials develop toxins as a result of microbiological infestation or chemical contamination. The ears of wheat, *bajra*, rye and millet plants sometimes contain a powdery substance in place of grains on account of a fungal disease called ergot. This powdery substance gets mixed up with healthy grains at the time of harvesting and produces a toxic effect on the human system, when consumed. Similarly, ground-

nuts, if stored in humid conditions, develop a mould which produces a powerful toxin known as aflatoxin—one of the most potent cancer-producing agents. Two common bacterial toxins normally developed on prepared foods or carried with food into the system are botulinum toxin which causes death due to food poisoning and staphylococcus toxin which produces severe stomach disorder. Then there are toxic chemicals which migrate from packing materials to the foods packed in them. Metal containers, when in direct contact with food leave toxic residues. Similarly, plastics packing materials leave plastic polymers in food when food reacts with them.

Aware of the hazards resulting from toxins to the human system, the Indian Standards Institution has drawn up a number of standards which lay down methods for the detection of toxins in food and provide guide-lines for proper storage and handling of commodities likely to develop toxins. Besides, a code for hygienic conditions in food processing units, prescribes the sanitary requirements necessary for preventing bacterial contamination during the preparation and processing of food articles. (*ISI Bulletin*, Vol. 36, January 1984, p. 3).