



## FORUM FOR BIOTECHNOLOGY & FOOD SECURITY

J-235/A, SAINIK FARMS, KHANPUR  
NEW DELHI – 110062 (INDIA)  
PH : +91 11 29556248; FX :- +91 11 29555961  
EMAIL – [genecamp@vsnl.com](mailto:genecamp@vsnl.com)  
WEB - <http://www.genecampaign.org>

# Press Release

Contact: DR. SUMAN SAHAI      MR. DEVINDER SHARMA  
Phone: - 98-110-41332 (cell)      98-113-01857(cell)  
Email: [genecamp@vsnl.com](mailto:genecamp@vsnl.com)      [dsharma@del6.vsnl.net.in](mailto:dsharma@del6.vsnl.net.in)

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### **GM Foods: Endangering India's Health**

Recent reports that rats fed on a diet rich in genetically modified maize developed organ abnormalities and changes in the blood profile, have raised fears about human health risks from eating genetically modified foods.

Data on the collapse of the immune system and organ abnormalities in rats fed with GM maize ( MON 863) have been leaked from secret research carried out by the multinational food giant Monsanto. The Monsanto study clearly showed that rats fed on normal maize were healthy. Monsanto has refused to make its 1139 page report public despite requests from several official quarters, including the European Food Safety Authority, stating that the report “contains confidential business information which could be of commercial use to our competitors”.

Dr Arpad Pusztai, formerly of the Rowett Institute in Scotland and pioneer of the rat feeding studies with GM foods, has said that the differences between GM maize and non-GM maize fed rats in the Monsanto study were so distinct that it was a clear indication that changes in the nutritional value and the biological/immunological properties of GM maize had taken place. He said that “It is almost impossible to imagine that major lesions in important organs (kidneys, liver, etc) or changes in blood parameters (lymphocytes, granulocytes, glucose, etc) that occurred in GM maize-fed rats, is incidental” . It may be recalled that Dr Pusztai had demonstrated some years ago that rats fed with GM potatoes show organ malformations and altered immune response.

In the USA, the Center for Food Safety (CFS) has alerted both the Environmental Protection Agency (EPA) and Monsanto about the failure of the company to comply with the adverse reporting requirements of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). According to CFS, the MON863 rat feeding study showed “unreasonable adverse effects” which should have been drawn to the attention of the regulators. Failure to do this is potentially a criminal offence.

Professor Bela Darvas of the Hungarian Academy of Sciences complained that they had asked Monsanto several times to provide MON 863 material necessary to conduct further research on behalf of the Hungarian government, but the company said that it did not wish to provide more modified seeds for research purposes. “This is absolutely unacceptable from a scientific standpoint. We cannot suspend studies into the safety of GM crops just because the findings upset the biotech industry. If this is a reflection of how little they care about the impact of their products on the environment, we have cause to be very concerned.”

Earlier studies on rats have also shown that the rodents don't take particularly to GM foods and have routinely rejected genetically modified foods in the laboratories. When the first genetically altered tomato “Flavr Savr” was fed to rodents in the labs in 1994, they refused to eat the GM tomatoes containing a foreign gene to make it ripen more slowly. Data revealed that many of the rats that ate the GM tomato developed lesions in their stomachs. For unknown reasons, researchers did not examine tissues elsewhere in the digestive tract. They also did not provide an explanation as to why seven of the forty rats that were fed with GM tomatoes died unexpectedly within two weeks.

There have been numerous reports of stomach lesions in rats, false pregnancies in cows, excessive cell growth and damage to animal immune systems.

In another experiment, researchers at the University of Cornell in America observed that the caterpillars of monarch butterfly when fed with genetically modified corn suffered varying degrees of ailments, and were crawling more slowly than usual. Scientists concluded that 44 per cent of the caterpillars died after being fed continuously with the GM corn pollens. None of those exposed to non-GM corn suffered. Those fed on normal corn pollen turned into butterflies.

This raises the obvious question. Why are the companies trying to force genetically altered foods to an unsuspecting population? Why are they shying away from making public the results of the research trials? Why are our politicians so keen to take the unproven technology? Why are our scientists blindly pushing a risky technology, which like chemical pesticides, can take a heavy human toll, pollute the environment and destroy the ecology?

In light of the damning evidence that is gathering about the health risks of GM foods, Gene Campaign, Forum for Biotechnology and Food Security, New Delhi, and other civil society groups demand an immediate ban on GM foods before these are seriously reviewed in India.

The provisions of the draft Indian policy are so reckless that they do not require safety testing for most GM foods. Health effects of the kind reported in the leaked Monsanto study would not even be detected in India since the new policy would not require their testing; the population would be exposed to such untested foods and it would be too late to do anything when the health impacts were detected .

There is widespread criticism of the draft biotechnology policy for its jettisoning the precautionary principle and putting in place provisions that will seriously jeopardize the safety of the environment and of human and animal health. The Monsanto study should be reason enough for a serious overhaul of the draft Biotechnology Policy, introducing elements of precaution, safety and public participation.

Mr Devinder Sharma and Dr. Suman Sahai raised a number of demands on behalf of civil society groups:

- We would like immediate publication of all the food and feed safety data that has been generated on the GM crops that are being researched in India. There are many of these, like cabbage, cauliflower, brinjal, potato, tomato and even rice.
- The methodology used for the food and feed safety tests must be made known to the public, as also the laboratories where such safety tests were conducted. All decisions on GM crops and foods must be taken in accordance with the provisions of the Cartagena Protocol on Biosafety which requires public participation.
- Food and Feed safety data must NOT be accepted from companies but must be generated in government laboratories, in a transparent manner, open to public scrutiny.
- A competent, transparent and independent regulatory process with more participation from the public/civil society to oversee all aspects of GM crops and foods must be put in place immediately, to replace the technically inadequate, and industry-friendly compromised regulatory structures that exist today.
- The import of GM foods into India must be stopped immediately; all foods that have been imported must be tested for the presence of GM foods and food safety tests should be conducted on these before their import can be allowed. We believe that much of the imported maize and soybean is genetically engineered, and so are numerous food products that are available in the supermarkets.
- A ban on the release of GM foods must be put in place immediately. There are several GM food crops in the pipeline; these must be held in abeyance until clear safety data, generated independently, have been subjected to a public risk-benefit analysis.
- Given the feeble health status and vulnerability of the Indian poor, the complete lack of information on safety testing procedures and the weak and inefficient regulatory system, it would be advisable for India to keep away GM foods.
- India is a storehouse of food and agricultural diversity and has many options to offer for food and nutritional security. There appears to be little reason why it should opt for potentially dangerous GM foods, especially when the systems in place for regulation are so demonstrably weak.

**Dr. Suman Sahai**

**Mr. Devinder Sharma**