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Open letter to: To all authorities worldwide regulating GE crops and food

On the basis of our research, we are concerned that the Cry1A toxins produced by genetically engineered (GE, also called genetically modified, GM) insect resistant *Bt* crops, could cause undesired immune reactions in humans. We are especially concerned with the use of the Cry1Ac protein in GE *Bt* rice (China). We therefore recommend that special caution should be taken to avoid releasing Cry-containing plants for human food.

We have demonstrated that recombinant Cry1Ac protoxin (pCry1Ac) administered to mice by the intraperitoneal (ip), intragastric (ig) or intranasal route induces systemic and mucosal antibody responses similar to those obtained with cholera toxin. Moreover Cry 1Ac protoxin has mucosal and systemic adjuvant effects, since it increases specific antibody responses to proteins such as bovine serum albumin and the hepatitis B surface antigen, and to polysaccharides such as the type 6capsular pneumococcal polysaccharide and a polyvalent pneumococcal polysaccharide vaccine. We have also found that Cry1A toxins are immunogenic, however it has not been tested if mice feeding with transgenic plants containing Cry toxins elicit immune reactions.

Transgenic plants containing significant amounts of Cry toxins, have been, or are being commercialized and used for human food production. However, there are no studies about the immunological or immunotoxicological properties of these transgenic plants such as *Bt* rice which may contain high concentrations of Cry1Ab and Cry1Ac toxins.

Therefore, we consider that the high immunogenicity and adjuvant properties of Cry1A proteins administered oral and intranasal routes should be taken into account and caution must be exercised to avoid releasing Cry-containing plants for human food use.

Yours faithfully

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