

## **A mini review on aflatoxin exposure in Malaysia : past, present, and future**

### **Abstract**

This mini review article described the exposure of aflatoxin in Malaysia, including its presence in the foodstuffs and the detection of aflatoxin biomarkers in human biological samples. Historically, the exposure of aflatoxin in Malaysia can be dated in 1960s where an outbreak of disease in pig farms caused severe liver damage to the animals. Later, an aflatoxicosis case in Perak in 1988 was reported and caused death to 13 children, as up to 3mg of aflatoxin was present in a single serving of contaminated noodles. Since then, extensive research on aflatoxin has been conducted in Malaysia. The food commodities such as peanuts, cereals, spices, and their products are the main commodities commonly found to be contaminated with aflatoxin. Surprisingly, some of the contaminated foods had levels greater than the permissible limit adopted by the Malaysian Food Regulation 1985. Besides, exposure assessment through the measurement of aflatoxin biomarkers in human biological samples is still in its infancy stage. Nevertheless, some studies had reported the presence of these biomarkers. In fact, it is postulated that Malaysians are moderately exposed to aflatoxin compared to those high risk populations, where aflatoxin contamination in the diets is prevalent. Since the ingestion of aflatoxin could be the integral to the development of liver cancer, the incidence of cancer attributable by dietary aflatoxin exposure in Malaysia has also been reported and published in the literatures. Regardless of these findings, the more important task is to monitor and control humans from being exposed to aflatoxin. The enforcement of law is insufficient to minimize human exposure to aflatoxin. Preventive strategies include agricultural, dietary, and clinical measures should be implemented. With the current research on aflatoxin in Malaysia, a global networking for research collaboration is needed to expand the knowledge and disseminate the information to the global scientific community.

**Keyword:** Aflatoxin; Aflatoxin B1; Aflatoxin exposure; Malaysia; Southeast Asia