OCHRATOXIN A (Group 3)

A. Evidence for carcinogenicity to humans (*inadequate*)

Incidence of and mortality from urothelial urinary-tract tumours have been correlated with the geographical distribution of Balkan endemic nephropathy in Bulgaria and Yugoslavia. A relatively high frequency of contamination of cereals and bread with ochratoxin A has been reported in an area of Yugoslavia where Balkan endemic nephropathy is present. No report of a direct association between ochratoxin A and human cancer is available[1].

B. Evidence for carcinogenicity to animals (*limited*)

When ochratoxin A was administered in the diet of mice for 24 months, renal adenomas and carcinomas were observed in males and some hepatocellular carcinomas were observed in females in one study[2] and hepatomas and renal-cell tumours in male mice in another study[3]. Other studies by oral administration and studies by subcutaneous injection to mice and rats were inadequate in terms of the numbers of animals used and survival rates[1].

C. Other relevant data

No data were available on the genetic and related effects of ochratoxin A in humans.

Ochratoxin A did not induce sister chromatid exchanges in bone-marrow cells of Chinese hamsters treated *in vivo* or mutation in rodent cells treated *in vitro*; conflicting results were obtained for induction of unscheduled DNA synthesis in rodent hepatocytes. Ochratoxin A did not induce mutation in yeast or bacteria[4].

References

[1]*IARC Monographs, 31*, 191-206, 1983

[2]Bendele, A.M., Carlton, W.W., Krogh, P.A. & Lillehoj, E.B. (1985) Ochratoxin A carcinogenesis in the (C57BL/6J × C3H)F_1 mouse. *J. natl Cancer Inst., 75*, 733-742

[3]Kanisawa, M. (1984) Synergistic effect of citrinin on hepatorenal carcinogenesis of ochratoxin A in mice. *Dev. Food Sci.*, *7*, 245-254

[4]*IARC Monographs, Suppl. 6*, 434-436, 1987