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Strain- specific mammary tumor development following life-time oral administration of Ochratoxin A in DA and Lewis rats.

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Ochratoxin A (OA), a potent nephrotoxin in several species, is knownto be a renal carcinogen in animals and is implicated in the etiology of Balkan endemic nephropathy (BEN). The NTP (National Toxicology Program) classified Ochratoxin A as having clear evidence of carcinogenic activity, based on uncommon tubular adenomas and tubular cell carcinomas of the kidney and multiple fibroadenomas of the mammary gland, seen in the rat. As shown previously by Castengaro et al. (1998), induction of renal tumors by Ochratoxin Ais sex- and strain-specific in DA and Lewis rats, with DA males being most responsive and DA females being resistant however, that report was confined to the kidney and urinary tract. In order to obtain Ochratoxin A-induced tumorigenic information in rats, we administered Ochratoxin A (0.4 mg/kg) to both DA and Lewis rats for their life-times and extended the investigation to complete histopathology of all tissues and organs. In this study, we have also observedthe characteristic renal tumor that is highly strain- and sex-specific and there were increased incidences of proliferative mammary lesions in the Lewis rats but not in DA rats, indicating that these were also strain-specific. In view of the report of Ochratoxin A treatment related mammary fibroadenoma in F344 rats reported by NTP, it was observed in the present study that the apparently increased mammary hyperplasia and slightly increased fibroadenoma in the Lewis rats but not in DA rats. These results suggest that Ochratoxın A may play some role in mammary tumor development in

some rat strains.

Key words. Ochratoxin A, renal tumor, mammary gland, fibroadenoma, DA rats, Lewis rats