[Biol. Pharm. Bull., **18**, 1765-1767 (1995)] [Lab. of Biochemistry]

3-Deoxyglucosone Reductase in Dog Adrenal Glands. Identification as Aldose Reductase.

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3-Deoxyglucosone is one of the major cytotoxic intermediates in the Maillard reaction. Adrenal glands showed the highest NADPH-linked 3-deoxyglucosone reductase activity of dog tissues. The enzyme was purified to homogeneity from the adrenal glands, and demonstrated to be structually, functionally and immunologically identical with aldose reductase, which comprises about 6 % of the soluble adrenal proteins.

[Carcinogenesis, **16**, 2957-2963 (1995)] [Lab. of Biochemistry]

Suppression of Azoxymethane-induced Rat Colon Carcinogenesis by Dietary Administration of Naturally Occurring Xanthophylls Astaxanthin and Canthaxanthin During the Postinitiation Phase.

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The modulating effects of dietary feeding of two xanthophylls, astaxanthin (AX) and canthaxanthin (CX), during the postinitiation phase on colon carcinogenesis were investigated in male F344 rats. AX and CX feeding decreased cell proliferation activity as revealed by measuring 5'-bromodeoxyuridine-labeling index in crypt cells, colonic mucosal ornithine decarboxylase activity and blood polyamine levels. These results indicate that AX and CX are possible chemopreventers for carcinogenesis of colon and such effects may be partly due to supression of cell proliferation.

[Int. Arch. Allergy Immunol., **106**, 78-85 (1995)] [Lab. of Pharmacology]

Effect of ZCR-2060, an antiallergic agent, on antigen-induced immediate- and late-phase increases in airway resistance in sensitized guinea pigs.

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The Effect of 2-[2-[4-(diphenylmethyl)-1-piperadinyl] ethoxy] benzoic acid maleate (ZCR-2060) on passive systemic anaphylaxis (PSA) and antigen-induced immediate- and late-phase increases in airway resistance (Rrs) in either passively or actively sensitized guinea pigs were investigated. ZCR-2060 inhibited PSA, the aeroantigen-induced immediate increases in Rrs in passively sensitized guinea pigs, and also inhibited both immediate- and late-phase increases in Rrs in actively sensitized guinea pigs. The effect of ZCR-2060 on late-phase response was almost the same as that of prednisolone. ZCR-2060 has a potent protective effect on both these increases in Rrs.