

[Jpn. J. Cancer Res., 87, 349-356 (1996)]

[Lab. of Biochemistry]

**Chemopreventive Effect of a Xanthine Oxidase Inhibitor,  
1'-Acetoxychavicol Acetate, on Rat Oral Carcinogenesis.**

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The effect of a xanthine oxidase inhibitor, 1'-acetoxychavicol acetate (ACA), on 4-nitroquinoline 1-oxide (4-NQO)-induced oral carcinogenesis was investigated in male F344 rats. The number of AgNORs per cell nucleus, BrdU-labeling index and polyamine levels were significantly decreased by feeding of ACA. These results indicate that ACA inhibited rat oral carcinogenesis, and such inhibition might be related to suppression of cell proliferation in the oral mucosa by the xanthine oxidase inhibitor.

[Arch. Biochem. Biophys., 328, 265-271 (1996)]

[Lab. of Biochemistry]

**Aldose Reductase is a Major Reductase for Isocaproaldehyde,  
a Product of Side-Chain Cleavage of Cholesterol, in Human  
and Animal Adrenal Glands.**

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Isocaproaldehyde is a product of the side-chain cleavage of cholesterol, the first step of steroid biosynthesis. The major species of isocaproaldehyde reductase purified from human, monkey, dog, and rabbit adrenal glands were biochemically identical with aldose reductase. In addition, the purified enzymes reduced other alkanals and alkenals at low  $K_m$  values. Thus, aldose reductase acts not only as a major reductase for isocaproaldehyde formed from steroidogenesis but also as a scavenger of aldehydes derived from lipid peroxidation in mammalian adrenal glands.

[Genomics, 34, 147-148 (1996)]

[Lab. of Biochemistry]

**Cloning a cDNA for Carbonyl Reductase (*Cbr*) from Mouse  
Cerebellum: Murine Genes That Express *Cbr* Map to Chromosomes  
16 and 11.**

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A human *CBR* cDNA was used to identify a homologous mouse clone by genomic library screening. Northern blotting showed that this mouse *Cbr* gene is expressed as a 1.2-kb transcript in all tested mouse tissues. Full-length mouse cDNA was cloned. The corresponding *Cbr* gene (*Cbr1*) and another *Cbr* gene (*Cbr2*), that is expressed specifically in lung, map to different positions, the distal portions of chromosomes 16 and 11, respectively.