〔Carcinogenesis, **7**, 375 (1986)〕

Mutagenic Activation of Carcinogenic *N*-Nitrosopropylamines by Liver S9 Fractions from Mice, Rats, and Hamsters: Evidence for a Cytochrome P-450 Dependent Reaction.

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The mutagenic potential of 9 carcinogenic *N*-nitrosopropylamines was examined using liver 9000 *g* supernatant fractions from female rats and male hamsters and mice for metabolic activation. All showed positive mutagenicity in strain TA100 in the presence of liver S9 from three animal species pretreated with polychlorinated biphenyls or phenobarbital (PB). These results demonstrate a correlation between the mutagenicity of 9 *N*-nitrosopropylamines mediated by liver S9 from three animal species and their known carcinogenicity in rodent *in vivo* experiments, and that the PB-inducible major cytochrome P-450 is selectively involved in the mutagenic activation.

〔Jpn. J. Cancer Res. (Gann), **77**, 107 (1986)〕

A Comparative Study of the Mutagenic Activation of *N*-Nitrosopropylamines by Various Animal Species and Man: Evidence for a Cytochrome P-450 Dependent Reaction.

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The mutagenic potential of 7 carcinogenic *N*-nitrosopropylamines was examined by means of Ames' preincubation assay using liver 9000 *g* superanatant fractions from rats, hamsters, mice, rabbits, monkeys and humans for metabolic activation. Six of them showed positive mutagenicity in strain TA100 in the presence of liver S9 from each of the uninduced animals, but *N*-nitrosobis (2-hydroxypropyl)-amines was negative. In the presence of liver S9 from humans, only 3 of them showed positive mutagenicity. The phenobarbital-inducible major cytochrome P-450 in animal and human livers was involved in the mutagenic activation of the *N*-nitrosopropylamines.

〔Mutat. Res., **160**, 159 (1986)〕

Activation of Carcinogenic *N*-Nitrosopropylamines to Mutagens by Lung and Pancreas S9 Fractions from Various Animal Species and Man.

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The mutagenic potential of 7 carcinogenic *N*-nitrosopropylamines was examined using 9000×*g* supernatant fractions of target organs from rats, hamsters, mice, rabbits, monkeys and humans for metabolic activation. Only the methyl derivatives of *N*-nitrosopropylamines, *N*-nitrosomethyl(2-hydroxypropyl)amine (MHP) and *N*-nitrosomethyl(2-oxopropyl)amine were activated by the lung from 5 animal species and man, whereas the pancreas from all the animals tested did not activate the 7 *N*-nitrosopropylamines to mutagens. The phenobarbital-inducible major cytochrome P-450 in the lung of rodents was involved in the mutagenic activation of MHP.