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Mutagenicity of α -Hydroxy *N*-Nitrosamines in V 79 Chinese Hamster Cells*

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N-Nitrosodialkylamines are activated metabolically by α -hydroxylation. Chemical properties and bacterial mutagenicity of α -hydroxy *N*-nitrosamines have been reported previously. This paper describes potent and direct mutagenicity of four *N*-nitroso-*N*-(hydroxymethyl)alkylamines in V 79 Chinese hamster cells, using ouabain resistance as an indicator. The mutagenic potency depended on the alkyl group, decreasing in the following order : methyl > ethyl > propyl, butyl. A similar order was observed for cytotoxicity. Mutagenic and cytotoxic potencies of these α -hydroxy *N*-nitrosamines in V 79 cells were well correlated not only with those of model compounds (α -acetoxy and α -hydroperoxy *N*-nitrosamines), but also with their alkylating ability, measured by alkylation of thiophenol. The mutagenic activity of the α -hydroxy *N*-nitrosamines in V 79 cells was shown to be parallel to that in *Salmonella typhimurium* TA 1535 and to that of *N*-nitrosodialkylamines in V 79 cells, after metabolic activation by rat hepatocytes. The results obtained here further support the conclusion that the α -hydroxy *N*-nitrosamine is the active species in the metabolic activation of carcinogenic and mutagenic *N*-nitrosodialkylamines.

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I.K. O'Neill, R.C. Von Borstel, C.T. Miller, J. Long and H. Bartsch, eds.
Lyon, International Agency for Research on Cancer, 1984 に発表

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