Title	Mutagenicity of α-hydroxy N-nitrosamines in V79 Chinese hamster cells
Sub Title	
Author	望月, 正隆(Mochizuki, Masataka) 長部, まり子(Osabe, Mariko) 安生, 孝子(Anjo, Takako) 武田, 啓(Takeda, Kei) 鈴木, 恵真子(Suzuki, Emako) 岡田, 正志(Okada, Masashi)
Publisher	共立薬科大学
Publication year	1985
Jtitle	共立薬科大学研究年報 (The annual report of the Kyoritsu College of Pharmacy). No.30 (1985.) ,p.114- 114
JaLC DOI	
Abstract	
Notes	抄録
Genre	Technical Report
URL	https://koara.lib.keio.ac.jp/xoonips/modules/xoonips/detail.php?koara_id=AN00062898-00000030-0114

No. 30 (1985)

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

Masataka MOCHIZUKI, Mariko OSABE**, Takako ANJO**,
Kei TAKEDA**, Emako SUZUKI** and Masashi OKADA**

望月正隆，長部まり子**，安生孝子**，武田　啓**，鈴木恵真子**，岡田正志**

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.

---

* 本報告は，*N*-Nitroso Compounds :
Occurrence, Biological Effects and Relevance to Human Cancer
(*IARC Scientific Publications No.* 57)
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

** 東京生化学研究所