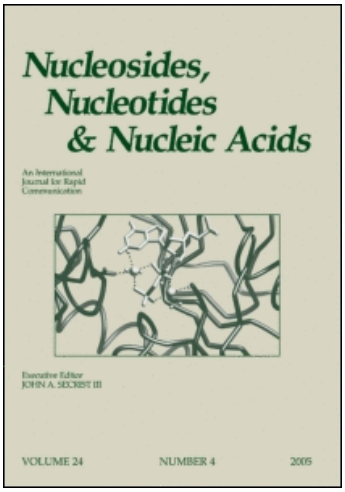

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Preparation of Guanosines Modified by Carcinogenic Aromatic Amines

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PREPARATION OF GUANOSINES MODIFIED BY CARCINOGENIC AROMATIC AMINES

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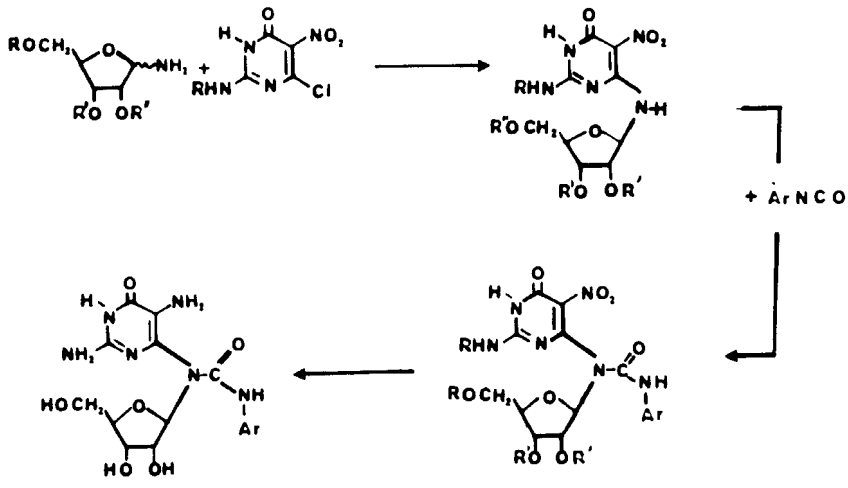
Summary : a general synthetic pathway has been developped to obtain aromatic amine-imidazole ring opened guanosine adducts.

Carcinogenic aromatic amines bind covalently to nucleic acids after metabolic activation into hydroxylamino derivatives. One of the major products obtained both in vitro and in vivo corresponds to an adduct in which the amino group of the carcinogen is bound to the C-8 position of guanine. More recently pyrimidine-type nucleosides 1 have been identified which could result from ring opening of the imidazole moiety in the latter adduct. This was observed notably in the case of 2-aminofluorene. In order to evaluate the physicochemical as well as the biological properties of this class of new compounds we have developped the general synthetic scheme as indicated :



1

Ar = Ph
Ar = 2-aminofluorenyl

0732-8311/85/0401-0213$3.50/0

This route was applied to the model aniline molecule and to the carcinogenic substance 2-aminofluorene.