TRIAZENE DERIVATIVES ENDOWED WITH ANTIPROLIFERATIVE AND ANTIVIRAL ACTIVITIES

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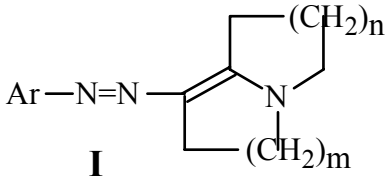
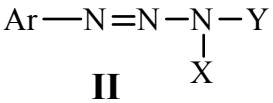
The importance of triazene derivatives as antitumor agents is well known [1], one example being represented by 5-(3,3-dimethyl-1-triazeno)imidazole-4-carboxamide (DTIC, dacarbazine). The triazene moiety may also be embedded in a cyclic structure, as in the acyltriazene prodrug temozolomide, which *in vivo* gives rise to 5-(3-methyl-1-triazeno)imidazole-4-carboxamide (MTIC). Many other substances have been developed, in which the heterocyclic part of dacarbazine has been replaced by variously substituted benzene rings.
As part of a vast research program aimed at the synthesis of new antiproliferative and/or antiviral compounds, we have recently described [2] a series of aryl/heteroarylazoenamines corresponding to the general structure **I**:



I

Ar = aryl, heteroary

These compounds show significant activity on a variety of RNA^+ and RNA^- viruses at non cytotoxic concentrations.
Since arylazoenamines may be considered as vinylogues of aryltriazenes, we deemed interesting to broaden our studies to include a selected set of substances represented by the general formula **II**:



II

Ar = aryl, heteroaryl
X = H, alkyl,dialkylaminoalky
Y = aryl, heteroaryl, alkyl

Some of the compounds tested so far were cytotoxic for MT-4 cells, while others showed a selective, although not very potent activity against viruses representative of the *Flaviviridae* and *Paramyxoviridae* families.

[1] B. Kimball, M. H. Haley, Angew. Chem., Int. Ed., 41, 3338 (2002).
[2] M. Tonelli, F. Mina, C. Canu, V. Boido, F. Sparatore, P. La Colla, A, Cabizza, V. Murru, C. Ibba, R. Loddo, XVII Conv. Naz. Div. Chim. Farm. Soc. Chim. It., Pisa, 6-10 settembre 2004, Atti, pag. 242.