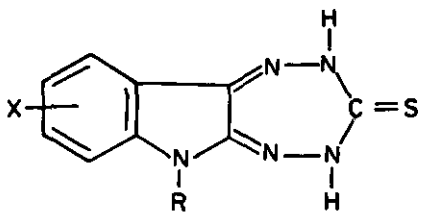
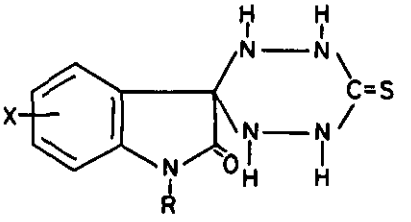
A NOVEL SPIRO SYSTEM: 2-OXO-1',2',4',5'-TETRAHYDRO SPIRO[3H-INDOLE-3,3'-1,2,4,5-TETRAZINE]-6'-THIONE

Krishna C. Joshi, Pooran Chand and Anshu Dandia
Department of Chemistry, University of Rajasthan,
Jaipur-302015, India.

In an attempt to prepare some novel pharmacologically active heterocycles containing indole ring system, an interesting reaction was noticed when indole-2,3-diones were allowed to react with thiocarbohydrazide. From an analogy of the reaction of indole-2,3-dione with thiosemicarbazide, a condensed system (I) was expected but instead, a spiro system (II) was formed. 65-75 % yields of these novel compounds were obtained. On the basis of elemental analyses, I.R., ^{1}H N.M.R. and mass spectral studies, the structure of ring system was established as 2-oxo-1',2',4',5'-tetrahydro spiro [3H-indole-3,3'-1,2,4,5-tetrazine]-6'-thione.



I



II

X = H, 5-F, 6-F

R = H, $COCH_3$, $-CH_2-CH_2-N$ O