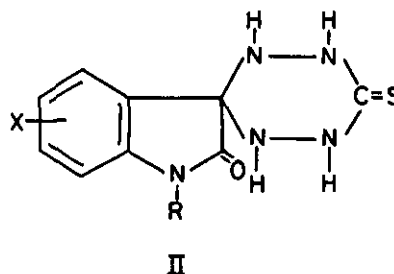
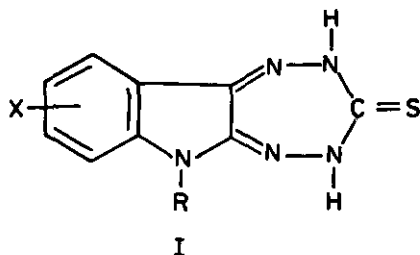


A NOVEL SPIRO SYSTEM: 2-OXO-1',2',4',5'-TETRAHYDRO
SPIRO[3H-INDOLE-3,3'-1,2,4,5-TETRAZINE]-6'-THIONE

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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., ^1H 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.



X = H, 5-F, 6-F

R = H, COCH₃, -CH₂-CH₂-N(CH₂)₂O