SYNTHESIS OF TETRACYCLIC SYSTEMS AND (THIO)UREAS FROM AMINODI(HETERO)ARYLAMINES IN THE THIENO[3,2-b]PYRIDINE SERIES

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Our research group has been interested in the synthesis of di(hetero)arylamines either in the pyridine or in the thiophene ring in the thieno[3,2-b]pyridine series and some of the compounds obtained have shown very low GI\textsubscript{50} values in human tumor cell lines [1,2].

Here we present the synthesis of tetracyclic compounds and also urea and thiourea derivatives from aminodi(hetero)arylamines prepared by reduction of the corresponding nitro compounds which were obtained by Buchwald-Hartwig palladium-catalyzed C-N coupling [2]. If a longer reaction time in the reduction is used, the tetracyclic [1,4]diazepin-7-ones are formed (Scheme). From the aminodi(hetero)arylamines it was also possible to prepare ureas or thioureas by reaction with phenyliso(thio)cyanates (Scheme).

![Scheme](attachment:image)

The tetracyclic [1,4]diazepin-7-ones and the (thio)urea derivatives obtained will be submitted to biological activity studies as potential antitumor and/or anti-angiogenic compounds.

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