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P-26

High efficient intramolecular cyclisation *of ortho*-halodiarylamides or amines to thienocarbazoles and indolobenzo[*b*]thiophenes

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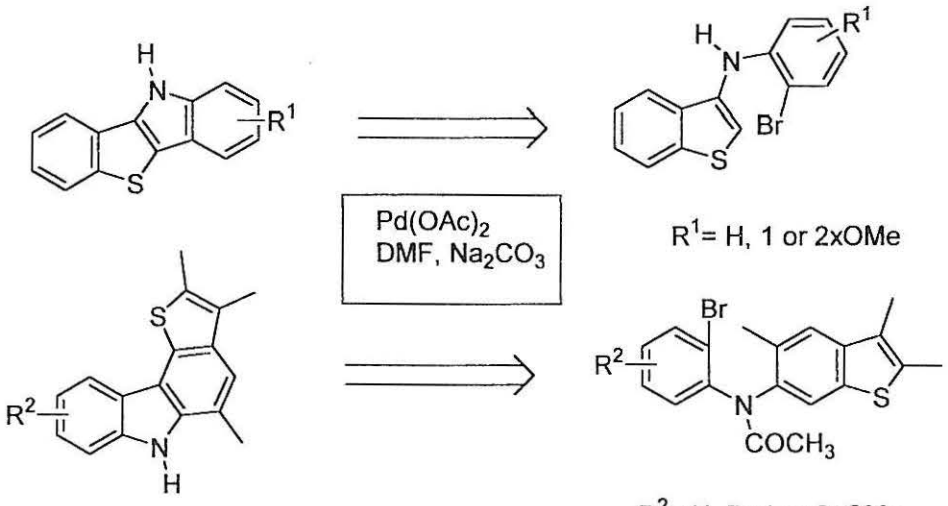
With the aim of synthesising new DNA intercalating compounds with potential antitumor properties, we found a high efficient intramolecular cyclisation method of *ortho*-halodiarylamines to indolobenzo[*b*]thiophenes and of *ortho*-halodiarylamides to thienocarbazoles.



The diarylamines precursors of indolobenzo[*b*]thiophenes were prepared by Buchwald-Hartwig coupling and the diarylamides precursors of thienocarbazoles were prepared by Goldberg coupling or by *N*-acetylation of *ortho*-halodiarylamines obtained by the first method. The latter amines didn't cylize to thienocarbazoles like did the indolobenzo[*b*]thiophene precursors.

The two polycyclic aromatic systems obtained are bioisosteres of the known antitumor compounds, ellipticine and olivacine.

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