COMMENTS ON A RECENT ARTICLE PUBLISHED IN "HETEROCYCLES" ENTITLED "STUDIES ON THE SYNTHESIS OF BIS-INDOLE ALKALOIDS XIII. A SYNTHESIS OF CATHARINE" BY J.P. KUTNEY ET AL.

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Our attention has been drawn to a paper which was recently published in this journal[1] where the authors claimed to have achieved the "first synthesis of the alkaloid catharine". In fact, they also pointed out in the same article that they first prepared catharine without knowing it was catharine as they attributed to the compound formed a wrong structure[2]. This error came from misinterpretation of spectral data in particular nmr (where they could not see the peak corresponding to the N-CHO grouping present in catharine, although the proposed structure could not fit at all the observed nmr pattern).

It must be recalled that the syntheses of several dimeric indole alkaloids isolated from Catharanthus spp. were made possible when we discovered, for the first time, a method derived from our main work in the field of a modification of the Polonovski reaction[3]. This method was subsequently taken up by several other workers including J.P. Kutney and co-workers[4-6].

We also revealed the general strategy to be used to achieve the syntheses of a number of indole alkaloids of the vinblastine group[7]. It is gratifying to see that this expectation was indeed correct and was used, in particular, by Kutney and co-workers, in addition to our own work.

More recently, we disclosed a very simple method for preparing the biologically active alkaloid leurosine by air oxidation of anhydrovinblastine[8]. In this paper we also pointed out that catharine was also formed during the same reaction (cf. footnote 10 of this afore mentioned paper (ref. 8)).

In another paper[9], we discussed at length the different possibilities for explaining the formation of the observed products and in particular catharine. We emphasized the fact that some of the "dimeric" compounds of the vinblastine group could be merely considered as over-oxidation products derived from anhydrovinblastine. Finally, we also pointed out[8,9] that leurosine and other "downstream" products could well be artefacts formed from a common obvious precursor : anhydrovinblastine.

In conclusion, it is difficult to find, once again, any originality in the paper published by Kutney et al.[1]. Moreover, this paper was sent to the

publisher just after our own work was published[8]. We still consider, even if the Kutney paper was sent in bona fide, that it is more important to publish, even in a preliminary form, the preparation of a biologically active compound, i.e. leurosine and put as a footnote in the same article the formation of the biologically inactive catharine.

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