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Short Communication

^{13}C-NMR of *Rauwolfia* alkaloids

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In a recent communication [1], Almeida and Guzmàn reported on their comparative analysis of the natural-abundance ^{13}C-NMR spectra of the *Rauwolfia* alkaloids, rescinnamine and reserpine. In making their analysis of rescinnamine, they simply assigned carbon resonances by analogy with those reported earlier by Wenkert *et al.* [2] for reserpine.

Unfortunately, the authors of the communication were not aware of a comprehensive revision of ^{13}C-NMR chemical shift assignments for reserpine based on the use of two-dimensional (2-D) methods [3] because the two studies appeared at approximately the same time. Two of the ^{13}C-NMR assignments for reserpine [2], viz. for carbons 15 and 20, were found by 2-D studies [3] to be incorrect and were reversed. By analogy, the same reversal of assignments for these carbons is therefore required in the data for rescinnamine reported by Almeida and Guzmàn [1].

Using their rescinnamine ^{13}C data, and that for some isomers of yohimbine (their ref. 12 is apparently omitted in the published communication), Almeida and Guzmàn then provide an argument for predicting the *cis* C/D and D/E or *trans* C/D and *cis* D/E ring junctions of their rescinnamine, based on the magnitude of the ^{13}C frequencies for carbons 5, 15 and 21. In spite of the needed interchange of chemical shift values for carbons 15 and 20, their argument in this regard does not appear to be invalidated because of the similarity in magnitude of these two resonances (δ32.2 and δ33.8) compared with that (δ37.9) for carbon 15 of the alleged *trans* C/D and *cis* D/E yohimbine conformation.

References

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