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- 1. Khan, S., Jabbar, A., Hasan, C.M. and Rashid, M.A. 2000. Nasimaluns A and B: *neo*-clerodane diterpenoids from *Barringtonia racemosa*. J. Nat. Prod. **63**, 410-411.
- Rashid, M.A., Gustafson, K.R., Crouch, R.C., Groweiss, A., Pannell, L.K., Van, Q.N. and Boyd, M.R. 2002. Application of high-field NMR and cryogenic probe technologies in the structure elucidation of poecillastrin A, a new antitumor macrolide lactam from the sponge *Poecillastra* species. *Org. Lett.* 4, 3293-3296.
- Harborne, J.B. and Williams, C.A. 2000. Advances in flavonoid research since 1992. *Phytochemistry* 55, 481-504
- 4. Mabry, T., Markham, K.R. and Thomas, M.B. 1971. *The Systematic Identification of Flavonoids*. Springer Verlag, New York, p. 43.
- 5. Harborne, J.B. 1983. In: *Chemistry and Chemical Taxonomy of the Rutales* (Waterman, P.G. and Grundon, M.F., Eds.), Academic Press, London, Chapter 2, pp. 147-173.
- Hasan, C.M. 1982. Phytochemical studies on some African Annonaceae. Ph.D. Thesis, University of Strathclyde, U.K., p. 35.
- 7. Davis, R. 1998. US Patent 5, 708, 591.

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