

On the use of ecdysteroid nomenclature

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In some of papers given at the XI Ecdysone Workshop “ecdysone” was used as a generic term. This is not desirable. Ecdysone is the trivial name of a specific compound, namely (22R)-2 β ,3 β ,14 α ,22,25-penta-hydroxy-5 β -cholest-7-en-6-one.

Since we felt that there is a need for a generic term, we proposed, in 1976, the term ecdysteroids, in analogy to e.g., corticosteroids (Karlson & Koolman, 1976; Scheller & Karlson, 1977). The term has been widely accepted by scientists working in the field (Goodwin et al. 1978) and it should also be used by molecular biologists.

While initially ecdysteroids were defined as “all compounds structurally related to ecdysone” (Goodwin et al., 1978) later Lafont & Horn more precisely distinguished between “true ecdysteroids” and “ecdysteroid-related compounds” (1989). According to their definition true ecdysteroids are “compounds where the steroid nucleus bears a *cis*-fused A/B ring junction, a 7-en-6-one chromophore and a 14 α -OH’ (irrespective of a moulting hormone activity). This definition of an ecdysteroid is based on chemical structure rather than on biological activity. If, however it is desirable to stress the biological activity of a compound or a group of compounds, the term “moulting hormone” may be used. Thus, the hormonally active nonsteroidal compound RH 5849 (Wing, 1988), e.g., is a moulting hormone agonist, but not an ecdysteroid (or an “ecdysone”).

Trivial names have been given to many naturally occurring ecdysteroids from animal sources (zooecdysteroids) and from plant origin (phytoecdysteroids). Very useful compilations of the names, together with their formulae, are given in Hetru & Horn (1980), Rees (1989) and Lafont & Horn (1989). However, when these trivial names are used in a publication, the systematic name according to “Nomenclature of steroids” (IUPAC-IUB Joint Commission, 1989) should be given in a footnote to Materials and Methods.

Abbreviations were also introduced for ecdysteroids (Lafont et al., 1993). They are sometimes convenient, but should not be used excessively. Of course they should be explained when used initially in a manuscript.

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