STEROID NOMENCLATURE

THE FOLLOWING steroids are so well known as not to require the use of systematic names —

1. aetiocholanolone 8. dehydroepiandrosterone (DHA)
2. aldosterone 9. deoxycorticosterone (DOC)

3. androsterone 10. oestrone

4. cholesterol and the common sterols 11. oestradiol- 17β 12. oestradiol- 17α

5. corticosterone
6. cortisol
7. cortisone
13. oestriol
14. progesterone
15. testosterone

These names may be modified by addition or removal of substituent groups, thus -

11 β -hydroxytestosterone, 16-oxo DHA, 11-deoxycortisol, may be used as trivial names without confusion. Similarly the (a) dihydro- and (b) tetrahydro-derivatives of 2, 5, 6, 7 and 9, referring to compounds with (a) H added at 4 and 5 β and (b) in addition at 3 to give 3α -hydroxysteroids, need not be defined by systematic names. Thus—

tetrahydroaldosterone or dihydrocortisone

are acceptable trivial names. Also 5α -dihydrotestosterone is an acceptable trivial name. Reduction of a 20 carbonyl gives compounds such as 20α , or 20β -dihydroprogesterone. The term 20α -hydroxyprogesterone is wrong and thus unacceptable as a trivial name. The prefix 'epi' may also be used with trivial names to denote inversion at one centre, thus—

16-epioestriol, epiandrosterone and 11-epicortisol

are acceptable trivial names. For steroids with additional double bonds the prefix 'dehydro' may be used, thus—

11-dehydro-oestradiol-17α

is an acceptable trivial name. The prefix 'allo' and the marking of double bonds with a Δ are not allowed. The journal will not accept single-letter abbreviations for steroids.

The following trivial names referring to the steroids defined here are acceptable

16. androstenedione 4-androstene-3.17-dione

17. cortol-20- α or 20 β 5 β -pregnane-3 α , 11 β , 17 α , 21 α or 20 β -21-pentol

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18. cortolone- 20α or 20β 3α , 17α , 20α or β , 21-tetrahydroxy- 5β -pregnan-11-one 19. ecdysone 2β , 3β , 14α , 22β , 25-pentahydroxy-cholest-7-en-6-one

20. pregnenolone 3β -hydroxy-5-pregnene-20-one

21. urinary pregnanediol 5β -pregnane- 3α , 20α -diol

22. urinary pregnanetriol 5 β -pregnane-3 α ,17 α ,20 α -triol

Thus, for example, pregnenolone may be used without reference to its systematic name. Any other pregnenolone would of course, require definition by systematic name. These trivial names may be modified as in 11β -hydroxy-androstenedione or 21-hydroxy-regnenolone.

All other steroids, including those of the bile acid series must be properly defined by systematic names at first mention in accordance with the "Revised Tentative Rules for Nomenclature of Steroids" (IUPAC Commission on the Nomenclature of Organic Chemistry and IUPAC-IUB Commission on Biochemical Nomenclature) Biochim. biophys. Acta 164 (1968) 453-486.

ABBREVIATIONS FOR OTHER HORMONES AND USUAL SUBSTANCES

ADP: adenosine diphosphate AMP: adenosine monophosphate ATP: adenosine triphosphate

3',5'-cyclic AMP: 3',5'-cyclic adenosine monophosphate

ACTH: adrenocorticotrophin (or tropin)

HCG: chorionic gonadotrophin (or tropin), human

DNA: deoxyribonucleic acid

NAD: diphosphopyridine nucleotide

NADH: diphosphopyridine nucleotide, reduced form of

FSH: follicle-stimulating hormone

GH: growth hormone LH: luteinizing hormone

LtH: luteotrophic (or tropic) hormone

PTH: parathyroid hormone RNA: ribonucleic acid