

## STEROID NOMENCLATURE

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

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|--|---------------------------------|
| 1. aetiocholanolone                      | 8. dehydroepiandrosterone (DHA) |
| 2. aldosterone                           | 9. deoxycorticosterone (DOC)    |
| 3. androsterone                          | 10. oestrone                    |
| 4. cholesterol and the<br>common sterols | 11. oestradiol-17 $\beta$       |
| 5. corticosterone                        | 12. oestradiol-17 $\alpha$      |
| 6. cortisol                              | 13. oestriol                    |
| 7. cortisone                             | 14. progesterone                |
|  | 15. testosterone                |

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

11 $\beta$ -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 $\beta$  and (b) in addition at 3 to give 3 $\alpha$ -hydroxysteroids, need not be defined by systematic names. Thus—

tetrahydroaldosterone or dihydrocortisone

are acceptable trivial names. Also 5 $\alpha$ -dihydrotestosterone is an acceptable trivial name. Reduction of a 20 carbonyl gives compounds such as 20 $\alpha$ , or 20 $\beta$ -dihydroprogesterone. The term 20 $\alpha$ -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-17 $\alpha$

is an acceptable trivial name. The prefix 'allo' and the marking of double bonds with a  $\Delta$  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

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|---------------------------------------|---|
| 16. androstenedione                   | 4-androstene-3,17-dione   |
| 17. cortol-20- $\alpha$ or 20 $\beta$ | 5 $\beta$ -pregnane-3 $\alpha$ ,11 $\beta$ ,17 $\alpha$ ,21 $\alpha$ or 20 $\beta$ -21-pentol |

18. cortolone-20 $\alpha$ or 20 $\beta$	3 $\alpha$ ,17 $\alpha$ ,20 $\alpha$ or $\beta$ ,21-tetrahydroxy-5 $\beta$ -pregnan-11-one
19. ecdysone	2 $\beta$ ,3 $\beta$ ,14 $\alpha$ ,22 $\beta$ ,25-pentahydroxy-cholest-7-en-6-one
20. pregnenolone	3 $\beta$ -hydroxy-5-pregnene-20-one
21. urinary pregnanediol	5 $\beta$ -pregnane-3 $\alpha$ ,20 $\alpha$ -diol
22. urinary pregnanetriol	5 $\beta$ -pregnane-3 $\alpha$ ,17 $\alpha$ ,20 $\alpha$ -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 11 $\beta$ -hydroxy-androstenedione or 21-hydroxypregnenolone.

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 (appearing in this issue on p. 143).

#### ABBREVIATIONS FOR OTHER HORMONES AND USUAL SUBSTANCES

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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