International Nonproprietary Names for Pharmaceutical Substances

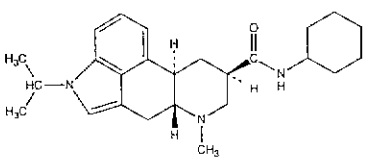
Notice is hereby given that, in accordance with article 3 of the Procedure for the Selection of Recommended International Nonproprietary Names for Pharmaceutical Substances (see Annexes), the following names are under consideration by the World Health Organization as Proposed International Nonproprietary Names. The inclusion of a name in the lists of Proposed International Nonproprietary Names does not imply any recommendation of the use of the substance in medicine or pharmacy.

Comments on, or formal objections to, the proposed names may be forwarded by any person to the Pharmaceuticals Unit of the World Health Organization within four months of the date of their publication in *WHO Drug Information*, i.e., for **List 67 Prop. INN not later than 30 November 1992.**

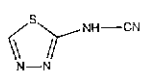
Proposed International Nonproprietary Names: List 67

Lists of proposed (1–58) and recommended (1–27) international nonproprietary names can be found in Cumulative List No. 7, 1988.

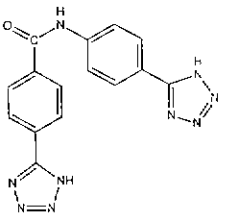
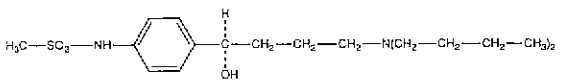
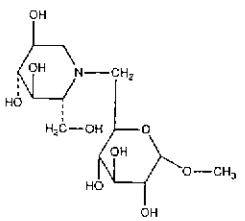
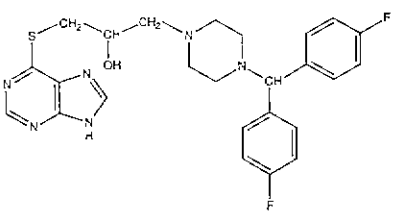
Proposed International Nonpropnetary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic formulae Chemical Abstracts Service (CAS) registry number Action and Use**		
amesergidum amesergide	*N*-cyclohexyl-1-isopropyl-6-methylergoline-8β-carboxamide $C_{25}H_{35}N_3O$	121588-75-8	*serotonin receptor antagonist*

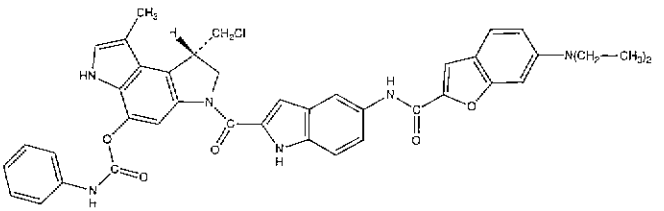
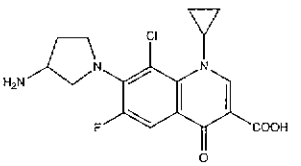
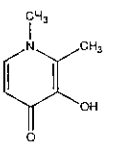
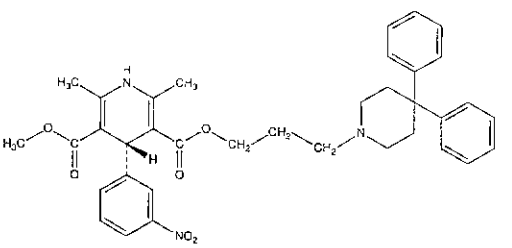
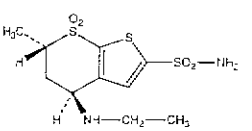


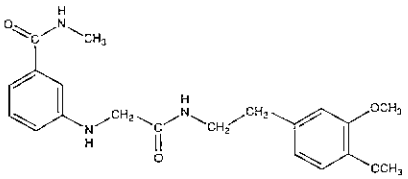
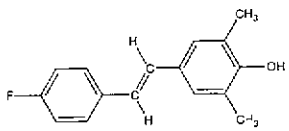
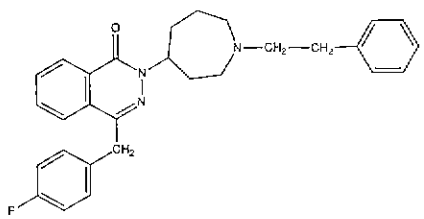
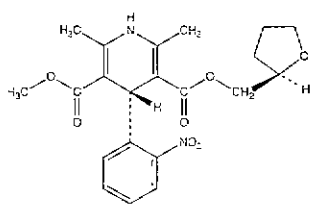
amitivirum amitivir	1,3,4-thiadiazole-2-carbamonitrile $C_3H_2N_4S$	111393-84-1	*antiviral*

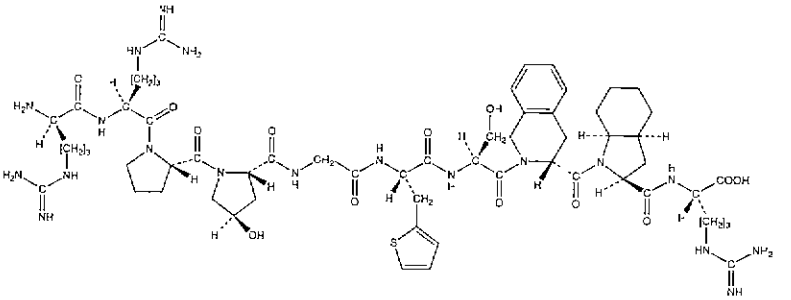
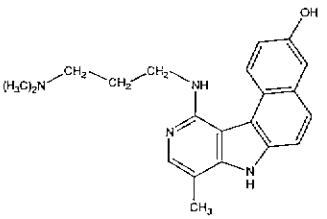
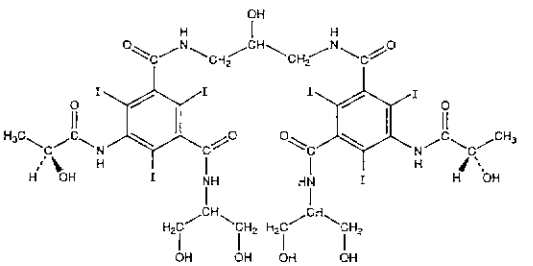
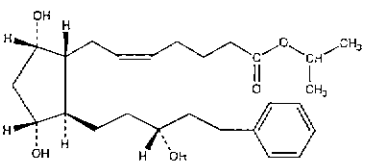


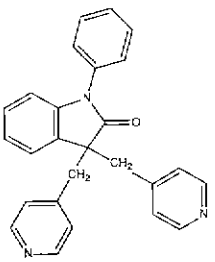
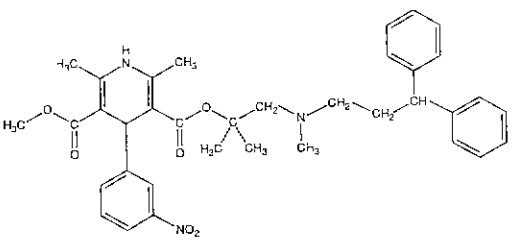
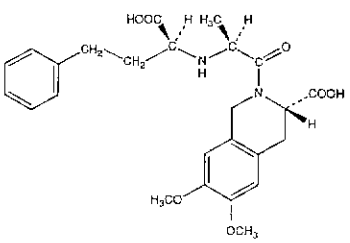
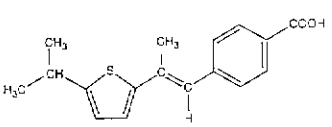
* *Action and Use: The statements in italics indicating the action and use are based largely on information supplied by the manufacturer. The information is meant to provide an indication of the potential use of new substances at the time they are accorded Proposed International Nonpropnetary Names. WHO is not in a position either to uphold these statements or to comment on the efficacy of the action claimed. Because of their provisional nature, these descriptors will be neither revised nor included in the Cumulative Lists of INNs.*

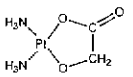
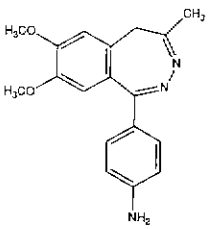
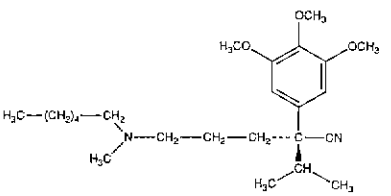
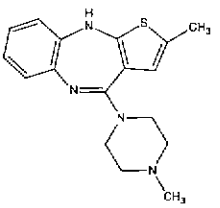
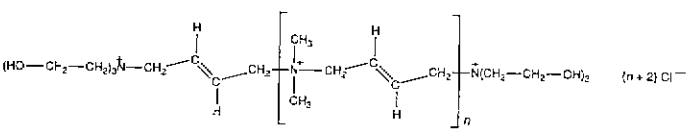
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic formulae Chemical Abstracts Service (CAS) registry number Action and Use**
andolastum andolast	4,4′-di-1*H*-tetrazol-5-ylbenzanilide $C_{15}H_{11}N_9O$ 132640-22-3 *antiallergic* 
artilidum artilide	(+)-4′-[(*R*)-4-(dibutylamino)-1-hydroxybutyl]methanesulfonanilide $C_{19}H_{34}N_2O_3S$ 133267-19-3 *antiarrhythmic* 
camiglibosum camiglibose	methyl 6-deoxy-6-[(2*R*,3*R*,4*R*,5*S*)-3,4,5-trihydroxy-2-(hydroxymethyl)piperidino]-α-D-glucopyranoside $C_{13}H_{25}NO_9$ 127214-23-7 *antidiabetic* 
carsatrinum carsatrin	4-[bis(*p*-fluorophenyl)methyl]-α-[(9*H*-purin-6-ylthio)methyl]-1-piperazineethanol $C_{25}H_{26}F_2N_6OS$ 125363-87-3 *cardiac stimulant* 

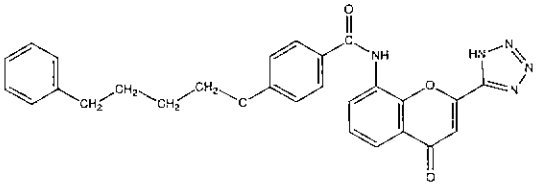
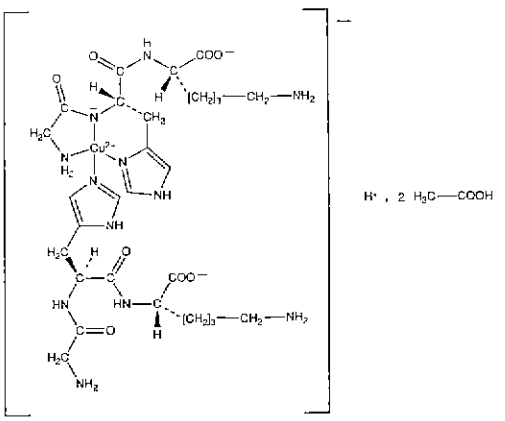
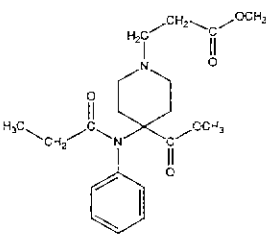
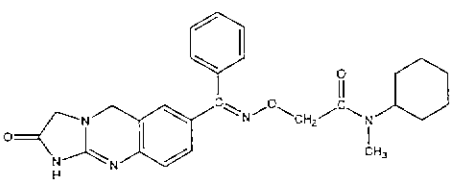
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic formulae Chemical Abstracts Service (CAS) registry number Action and Use**
carzelesinum carzelesin	N-[2-[[(*S*)-1-(chloromethyl)-1,6-dihydro-5-hydroxy-8-methyl= benzo[1,2-*b*:4,3-*b'*]dipyrrol-3(2*H*)-yl]carbonyl]indol-5-yl]-6-(diethylamino)-2-benzofurancarboxamide carbanilate (ester) $C_{41}H_{37}ClN_6O_5$ 119813-10-4 *antineoplastic* 
clinafloxacinum clinafloxacin	(±)-7-(3-amino-1-pyrrolidinyl)-8-chloro-1-cyclopropyl-6-fluoro-1,4-dihydro-4-oxo-3-quinolinecarboxylic acid $C_{17}H_{17}ClFN_3O_3$ 105956-97-6 *antibacterial* 
deferipronum deferiprone	3-hydroxy-1,2-dimethyl-4(1*H*)-pyridone $C_7H_9NO_2$ 30652-11-0 *chelating agent* 
dexniguldipinum dexniguldipine	(+)-(*R*)-3-(4,4-diphenylpiperidino)propyl methyl 1,4-dihydro-2,6-dimethyl-4-(*m*-nitrophenyl)-3,5-pyridinedicarboxylate $C_{36}H_{39}N_3O_6$ 120054-86-6 *antineoplastic* 
dorzolamidum dorzolamide	(4*S*,6*S*)-4-(ethylamino)-5,6-dihydro-6-methyl-4*H*-thieno[2,3-*b*]thiopyran-2-sulfonamide 7,7-dioxide $C_{10}H_{16}N_2O_4S_3$ 120279-96-1 *antiglaucoma* 

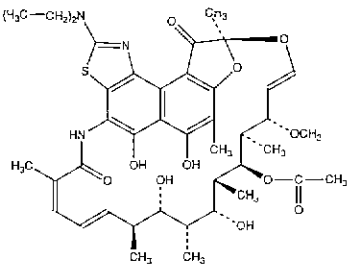
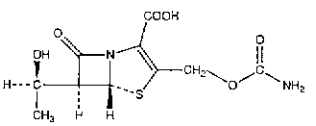
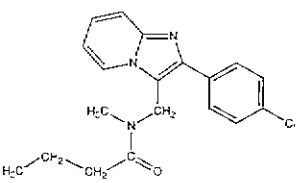
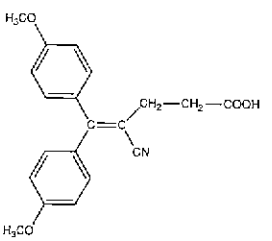
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description. Molecular and Graphic formulae Chemical Abstracts Service (CAS) registry number Action and Use**
ecabapidum ecabapide	*m*-[[[(3,4-dimethoxyphenethyl)carbamoyl]methyl]amino]-*N*-methylbenzamide $C_{20}H_{25}N_3O_4$ 104775-36-2 *antiulcer agent* 
enofelastum enofelast	(*E*)-4′-fluoro-3,5-dimethyl-4-stilbenol $C_{16}H_{15}FO$ 127035-60-3 *antiasthmatic, anti-inflammatory* 
epoetinum gamma epoetin gamma	1-165-erythropoietin (human clone λHEPOFL13 protein moiety), glycoform γ $C_{809}H_{1301}N_{228}O_{240}S_5$ 130455-76-4 *antianaemic* (for non-glycosylated protein)
flezelastinum flezelastine	(±)-4-(*p*-fluorobenzyl)-2-(hexahydro-1-phenethyl-1*H*-azepin-4-yl)-1(2*H*)-phthalazinone $C_{29}H_{30}FN_3O$ 135381-77-0 *antiasthmatic* 
furnidipinum furnidipine	(±)-methyl tetrahydrofurfuryl,1,4-dihydro-2,6-dimethyl-4-(*o*-nitrophenyl)-3,5-pyridinedicarboxylate $C_{21}H_{24}N_2O_7$ 138661-03-7 *calcium channel blocker*  and enantiomer

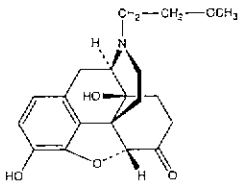
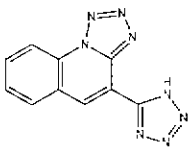
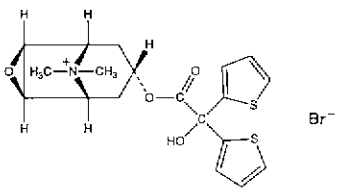
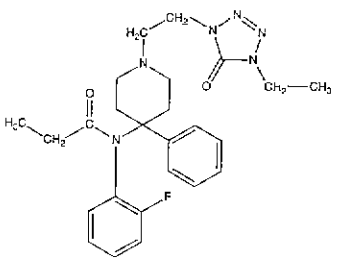
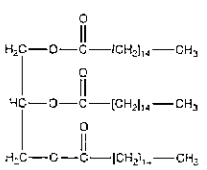
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic formulae Chemical Abstracts Service (CAS) registry number Action and Use**
icatibantum ıcatibant	(*R*)-arginyl-(*S*)-arginyl-(*S*)-prolyl-(2*S*,4*R*)-(4-hydroxyprolyl)glycyl-(*S*)-[3-(2-thienyl)alanyl]-(*S*)-seryl-(*R*)-[(1.2,3,4-tetrahydro-3-isoquinolyl)carbonyl]-(2*S*,3a*S*,7a*S*)-[(hexahydro-2-indolinyl)carbonyl]-(*S*)-arginine $C_{59}H_{89}N_{19}O_{13}S$ 130308-48-4 *bradykinin antagonist* 
toplicinum oplicine	11-[[3-(dimethylamino)propyl]amino]-8-methyl-7*H*-benzo[*e*]pyrido[4,3-*b*]=indol-3-ol $C_{21}H_{24}N_4O$ 125974-72-3 *antineoplastic* 
iofratolum iofratol	*N,N''*-(2-hydroxytrimethylene)bis[*N'*-[2-hydroxy-1-(hydroxymethyl)ethyl]-2,4,6-triiodo-5-[(*S*)-lactamido]isophthalamide] $C_{31}H_{36}I_6N_6O_{13}$ 141660-63-1 *contrast medium* 
latanoprostum latanoprost	isopropyl (*Z*)-7-[(1*R*.2*R*.3*R*,5*S*)-3,5-dihydroxy-2-[(3*R*)-3-hydroxy-5-phenylpentyl]cyclopentyl]-5-heptenoate $C_{26}H_{40}O_5$ 130209-82-4 *antiglaucoma* 

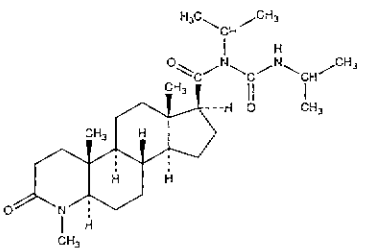
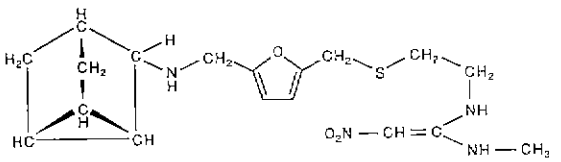
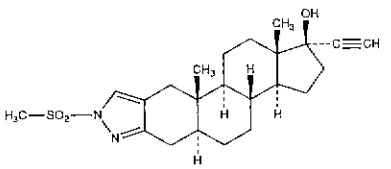
Proposed International Nonproprietary-Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic formulae Chemical Abstracts Service (CAS) registry number Action and Use**
linopirdinum linopirdine	1-phenyl-3,3-bis(4-pyridylmethyl)-2-indolinone $C_{26}H_{21}N_3O$ 105431-72-9 *nootropic agent* 
masnidipinum masnidipine	(±)-2-[(3,3-diphenylpropyl)methylamino]-1,1-dimethylethyl methyl 1,4-dihydro-2,6-dimethyl-4-(*m*-nitrophenyl)-3,5-pyridinedicarboxylate $C_{36}H_{41}N_3O_6$ 100427-26-7 *calcium channel blocker* 
mideplanınum mideplanin	a mixture of six substances of which 70% is: 34-[(2-acetamido-2-deoxy-β-D-glucopyranosyl)oxy]-15-amino-22,31-dichloro-56-[[2-deoxy-2-(8-methylnonanamido)-β-D-glucopyranosyl]oxy]-*N*-[3-(dimethylamino)propyl]-2,3,16,17,18,19,35,36,37,38,48,49,50,50a-tetradeca=hydro-6,11,40.44-tetrahydroxy-42-(α-D-mannopyranosyloxy)-2,16,36,50,51,59-hexaoxo-1*H*,15*H*,34*H*-20,23.30,33-dietheno-3,18:35,48-bis(iminomethano)-4,8.10,14 25,28.43,47-tetrametheno-28*H*-[1,14,6,22]dioxadiazacycloocta=cosino[4,5-*m*][10,2,16]benzoxadiazacyclotetracosine-38-carboxamide . $C_{93}H_{109}Cl_2N_{11}O_{32}$ 122173-74-4 *antibiotic*
moexiprilatum moexiprilat	(3*S*)-2-[(2*S*)-*N*-[(1*S*)-1-carboxy-3-phenylpropyl]alanyl]-1,2,3,4-tetrahydro-6,7-dimethoxy-3-isoquinolinecarboxylic acid $C_{25}H_{30}N_2O_7$ 103775-14-0 *angiotensin-converting-enzyme inhibitor* 
namirotenum namirotene	*p*-[(*E*)-2-(5-isopropyl-2-thienyl)propenyl]benzoic acid $C_{17}H_{18}O_2S$ 101506-83-6 *vitamin* 

Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic formulae Chemical Abstracts Service (CAS) registry number Action and Use**
nedaplatinum nedaplatin	*cis*-diammine(glycolato-O^1,O^2)platinum $C_2H_8N_2O_3Pt$ 95734-82-0 *antineoplastic* 
nerisopamum nerisopam	1-(*p*-aminophenyl)-7,8-dimethoxy-4-methyl-5*H*-2,3-benzodiazepine $C_{18}H_{19}N_3O_2$ 102771-12-0 *anxiolytic* 
nexopamilum nexopamil	(2*S*)-5-(hexylmethylamino)-2-isopropyl-2-(3,4,5-trimethoxyphenyl)valeronitrile $C_{24}H_{40}N_2O_3$ 136033-49-3 *antihypertensive, antianginal* 
olanzapinum olanzapine	2-methyl-4-(4-methyl-1-piperazinyl)-10*H*-thieno[2,3-*b*][1,5]benzodiazepine $C_{17}H_{20}N_4S$ 132539-06-1 *dopamine receptor antagonist* 
pegaldesleukinum pegaldesleukin	125-L-serine-2-133-interleukin 2 (human reduced),reaction product with glutaric anhydride, esters with polyethylene glycol monomethyl ester *antiviral, immunomodulator*
polidroniii chloridum polidronium chloride	α-[(*E*)-4-[tris(2-hydroxyethyl)ammonio]-2-butenyl-ω-[tris(2-hydroxyethyl)= ammonio]poly[(dimethyliminio)[(*E*)-2-butenylene] chloride] dichloride $(C_6H_{12}ClN)_n \cdot C_{16}H_{36}Cl_2N_2O_6$ 75345-27-6 *antimicrobial* 

*Proposed International Nonproprietary Name (Latin, English)**	*Chemical Name or Description, Molecular and Graphic formulae Chemical Abstracts Service (CAS) registry number Action and Use**
pranlukastum pranlukast	*N*-[4-oxo-2-(1*H*-tetrazol-5-yl)-4*H*-1-benzopyran-8-yl]-*p*-(4-phenylbutoxy)benzamide $C_{27}H_{23}N_5O_4$ 103177-37-3 *antiasthmatic, antiallergic* 
prezatidi cuprici acetas prezatide copper acetate	hydrogen [*N*²-(*N*-glycyl-L-histidyl)-L-lysinato][*N*²-(*N*-glycyl-L-histidyl)-L-lysinato(2−)]cuprate(1−), diacetate $C_{28}H_{46}CuN_{12}O_8 \cdot 2\,C_2H_4O_2$ 130120-57-9 *immunomodulator* 
remifentanilum remifentanil	4-carboxy-4-(*N*-phenylpropionamido)-1-piperidinepropionic acid, dimethyl ester $C_{20}H_{28}N_2O_5$ 132875-61-7 *anaesthetic* 
revizinonum revizinone	(*E*)-*N*-cyclohexyl-*N*-methyl-2-[[[α-(1,2,3,5-tetrahydro-2-oxoimidazo[2,1-*b*]quinazolin-7-yl)benzylidene]amino]oxy]acetamide $C_{26}H_{29}N_5O_3$ 133718-29-3 *cardiac stimulant* 

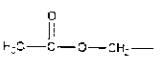
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic formulae Chemical Abstracts Service (CAS) registry number Action and Use*
rifamexilum rifamexil	(9*S*.12*E*,14*S*,15*R*,16*S*,17*R*,18*R*,19*R*,20*S*,21*S*,22*E*,24*Z*)-2-(diethylamino)-5,6,16,18,20-pentahydroxy-14-methoxy-7,9,15,17,19,21,25-heptamethyl-9,4-(epoxypentadeca[1,11,13]trienimino)furo[2′,3′:7,8]naphtho[1,2-*d*]thiazole-10,26(9*H*)-dione, 16-acetate $C_{42}H_{55}N_3O_{11}S$ 113102-19-5 *antibacterial* 
...penemum ...ipenem	(5*R*,6*S*)-6-[(1*R*)-1-hydroxyethyl]-3-(hydroxymethyl)-7-oxo-4-thia-1-aza=bicyclo[3.2.0]hept-2-ene-2-carboxylic acid, 3-carbamate $C_{10}H_{12}N_2O_6S$ 84845-57-8 *antibiotic* 
saripidemum saripidem	*N*-[[2-(*p*-chlorophenyl)imidazo[1,2-*a*]pyridin-3-yl]methyl]-*N*-methylbutyramide $C_{19}H_{20}ClN_3O$ 103844-86-6 *anxiolytic* 
satigrelum ...grel	4-cyano-5,5-bis(*p*-methoxyphenyl)-4-pentenoic acid $C_{20}H_{19}NO_4$ 111753-73-2 *platelet aggregation inhibitor* 
satumomabum satumomab	immunoglobulin G 1 (mouse monoclonal B72.3 anti-human glycoprotein TAG-72), disulfide with mouse monoclonal B72.3 light chain, dimer *diagnostic agent*

Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic formulae Chemical Abstracts Service (CAS) registry number Action and Use**
semorphonum semorphone	(−)-4,5α-epoxy-3,14-dihydroxy-17-(2-methoxyethyl)morphinan-6-one $C_{19}H_{23}NO_5$ 88939-40-6 *analgesic*
	
tetrazolastum tetrazolast	4-(1*H*-tetrazol-5-yl)tetrazolo[1,5-*a*]quinoline $C_{10}H_6N_8$ 95104-27-1 *antiallergic, antiasthmatic*
	
tiotropii bromidum tiotropium bromide	6β,7β-epoxy-3β-hydroxy-8-methyl-1α*H*,5α*H*-tropanium bromide, di-2-thienylglycolate $C_{19}H_{22}BrNO_4S_2$ 139404-48-1 *anticholinergic*
	
trefentanilum trefentanil	*N*-[1-[2-(4-ethyl-5-oxo-Δ²-tetrazolin-1-yl)ethyl]-4-phenyl-4-piperidyl]-2′-fluoropropionanilide $C_{25}H_{31}FN_6O_2$ 120656-74-8 *analgesic*
	
tripalmitinum tripalmitin	tripalmitin *or* 1,2,3-propanetriyl trihexadecanoate $C_{51}H_{98}O_6$ 555-44-2 *pharmaceutical aid*
	

Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic formulae Chemical Abstracts Service (CAS) registry number Action and Use**
turosteridum turosteride	1,3-diisopropyl-1-[(4-methyl-3-oxo-4-aza-5α-androstan-17β-yl)carbonyl]urea $C_{27}H_{45}N_3O_3$ 137099-09-3 *testosterone reductase inhibitor*
	
venritidinum venritidine	(±)-(*Z*)-*N*-methyl-2-nitro-*N'*-[2-[[5-[(tricyclo[2.2.1.$O^{2,6}$]hept-3-ylamino)=methyl]furfuryl]thio]ethyl]-1,1-ethenediamine $C_{18}H_{26}N_4O_3S$ 93064-63-2 *histamine H_2-receptor antagonist*
	
zanoteronum zanoterone	1'-(methylsulfonyl)-1'*H*-5α,17α-pregn-20-yno[3,2-*c*]pyrazol-17-ol $C_{23}H_{32}N_2O_3S$ 107000-34-0 *antiandrogen*
	

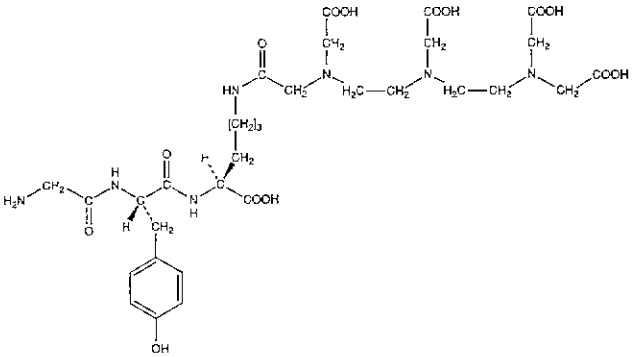
Names for Radicals and Groups

Some substances for which a proposed international nonproprietary name has been established may be used in the form of salts or esters. The radicals or groups involved may be of complex composition and it is then inconvenient to refer to them in systematic chemical nomenclature. Consequently, shorter nonproprietary names for some radicals and groups have been devised or selected, and they are suggested for use with the proposed international nonproprietary names.

acoxilum acoxil	acetoxymethyl $C_3H_5O_2$
	

pendetidum
pendetide

N^6-[*N*-[2-[[2-[bis(carboxymethyl)amino]ethyl](carboxymethyl)amino]ethyl]-*N*-(carboxymethyl)glycyl]-N^2-(*N*-glycyl-L-tyrosyl)-L-lysine
$C_{31}H_{47}N_7O_{14}$



AMENDMENTS TO PREVIOUS LISTS

Supplement to WHO Chronicle, Vol. 39, No. 4, 1985

Proposed International Nonproprietary Names (Prop. INN): List 54

p. 19 teceleukinum
teceleukin

replace the chemical name and the molecular formula by the following:

N-L-methionylinterleukin 2 (human)
$C_{698}H_{1127}N_{179}O_{204}S_8$

Supplement to WHO Chronicle, Vol. 40, No. 5, 1986

Proposed International Nonproprietary Names (Prop. INN): List 56

p. 9 limaprostum
limaprost

replace the chemical name by the following:

(*E*)-7-[(1*R*,2*R*,3*R*)-3-hydroxy-2-[(*E*)-(3*S*,5*S*)-3-hydroxy-5-methyl-1-nonenyl]-5-oxocyclopentyl]-2-heptenic acid

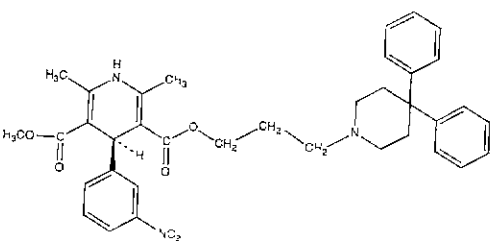
WHO Drug Information, Vol. 2, No. 4, 1988

Proposed International Nonproprietary Names (Prop. INN): List 60

p. 22 niguldipinum
niguldipine

replace the chemical name and the graphic formula by the following:

(−)-(*S*)-3-(4,4-diphenylpiperidino)propyl methyl 1,4-dihydro-2,6-dimethyl-4-(*m*-nitrophenyl)-3,5-pyridinedicarboxylate



WHO Drug Information, Vol. 4, No. 2, 1990

Proposed International Nonproprietary Names (Prop. INN): List 63

p. 4 cilobradinum
cilobradine

replace the CAS registry number by the following:

109859-78-1

WHO Drug Information, Vol. 4, No. 4, 1990

Proposed International Nonproprietary Names (Prop. INN): List 64

p. 8 dalfopristinum
dalfopristin

replace the chemical name by the following:

(3*R*,4*R*,5*E*,10*E*,12*E*,14*S*,26*R*.26a*S*)-26-[[2-(diethylamino)ethyl]sulfonyl]-8,9,14,15,24,25,26,26a-octahydro-14-hydroxy-3-isopropyl-4,12-dimethyl-3*H*-21,18-nitrilo-1*H*,22*H*-pyrrolo[2,1*c*][1,8,4,19]dioxadiazacyclotetracosine-1,7,16,22(4*H*,17*H*)-tetrone

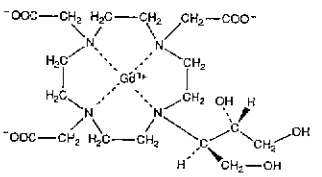
WHO Drug Information, Vol. 5, No. 4, 1991

Proposed International Nonproprietary Names (Prop. INN): List 66

p. 6 gadobutrolum
gadobutrol

replace the chemical name and the graphic formula by the following:

[10-[(1*RS*,2*SR*)-2,3-dihydroxy-1-(hydroxymethyl)propyl]-1,4,7,10-tetraazacyclo=dodecane-1,4,7-triacetato(3-)]gadolinium



and enantiomer

Annex 1

PROCEDURE FOR THE SELECTION OF RECOMMENDED INTERNATIONAL NONPROPRIETARY NAMES FOR PHARMACEUTICAL SUBSTANCES*

The following procedure shall be followed by the World Health Organization in the selection of recommended international nonproprietary names for pharmaceutical substances, in accordance with the World Health Assembly resolution WHA3.11:

1. Proposals for recommended international nonproprietary names shall be submitted to the World Health Organization on the form provided therefor.

2. Such proposals shall be submitted by the Director-General of the World Health Organization to the members of the Expert Advisory Panel on the International Pharmacopoeia and Pharmaceutical Preparations designated for this purpose, for consideration in accordance with the "General principles for guidance in devising International Nonproprietary Names", appended to this procedure. The name used by the person discovering or first developing and marketing a pharmaceutical substance shall be accepted, unless there are compelling reasons to the contrary.

3. Subsequent to the examination provided for in article 2, the Director-General of the World Health Organization shall give notice that a proposed international nonproprietary name is being considered.

A. Such notice shall be given by publication in the *Chronicle of the World Health Organization*[1] and by letter to Member States and to national pharmacopoeia commissions or other bodies designated by Member States.

(i) Notice may also be sent to specific persons known to be concerned with a name under consideration.

B. Such notice shall:

(i) set forth the name under consideration;

(ii) identify the person who submitted a proposal for naming the substance, if so requested by such person;

(iii) identify the substance for which a name is being considered;

(iv) set forth the time within which comments and objections will be received and the person and place to whom they should be directed;

(v) state the authority under which the World Health Organization is acting and refer to these rules of procedure.

C. In forwarding the notice, the Director-General of the World Health Organization shall request that Member States take such steps as are necessary to prevent the acquisition of proprietary rights in the proposed name during the period it is under consideration by the World Health Organization.

4. Comments on the proposed name may be forwarded by any person to the World Health Organization within four months of the date of publication, under article 3, of the name in the *Chronicle of the World Health Organization.*[1]

5. A formal objection to a proposed name may be filed by any interested person within four months of the date of publication, under article 3, of the name in the *Chronicle of the World Health Organization.*[1]

A. Such objection shall:

(i) identify the person objecting;

* Text adopted by the Executive Board of WHO in resolution EB15.R7 (*Off. Rec. Wld Health Org.*, 1955, **60**, 3) and amended by the Board in resolution EB43 R9 (*Off. Rec. Wld Hlth Org.*, 1969, **173**, 10)

[1] The title of this publication was changed to *WHO Chronicle* in January 1959. From 1987 onwards lists of INNs are published in *WHO Drug Information.*

(ii) state his interest in the name;

(iii) set forth the reasons for his objection to the name proposed.

6. Where there is a formal objection under article 5, the World Health Organization may either reconsider the proposed name or use its good offices to attempt to obtain withdrawal of the objection. Without prejudice to the consideration by the World Health Organization of a substitute name or names, a name shall not be selected by the World Health Organization as a recommended international nonproprietary name while there exists a formal objection thereto filed under article 5 which has not been withdrawn.

7. Where no objection has been filed under article 5, or all objections previously filed have been withdrawn, the Director-General of the World Health Organization shall give notice in accordance with subsection A of article 3 that the name has been selected by the World Health Organization as a recommended international nonproprietary name.

8. In forwarding a recommended international nonproprietary name to Member States under article 7, the Director-General of the World Health Organization shall:

A. request that it be recognized as the nonproprietary name for the substance; and

B. request that Member States take such steps as are necessary to prevent the acquisition of proprietary rights in the name, including prohibiting registration of the name as a trade-mark or trade-name.

Annex 2

GENERAL PRINCIPLES FOR GUIDANCE IN DEVISING INTERNATIONAL NONPROPRIETARY NAMES FOR PHARMACEUTICAL SUBSTANCES*

1. International Nonproprietary Names (INN) should be distinctive in sound and spelling. They should not be inconveniently long and should not be liable to confusion with names in common use.

2. The INN for a substance belonging to a group of pharmacologically related substances should, where appropriate, show this relationship. Names that are likely to convey to a patient an anatomical, physiological, pathological or therapeutic suggestion should be avoided.

These primary principles are to be implemented by using the following secondary principles:

3. In devising the INN of the first substance in a new pharmacological group, consideration should be given to the possibility of devising suitable INN for related substances, belonging to the new group.

4. In devising INN for acids, one-word names are preferred; their salts should be named without modifying the acid name, e.g. "oxacillin" and "oxacillin sodium", "ibufenac" and "ibufenac sodium".

5. INN for substances which are used as salts should in general apply to the active base or the active acid. Names for different salts or esters of the same active substance should differ only in respect of the name of the inactive acid or the inactive base.

For quaternary ammonium substances, the cation and anion should be named appropriately as separate components of a quaternary substance and not in the amine-salt style.

* In its twentieth report (WHO Technical Report Series, No. 581, 1975), the WHO Expert Committee on Nonproprietary Names for Pharmaceutical Substances reviewed the general principles for devising, and the procedures for selecting, international nonproprietary names (INN) in the light of developments in pharmaceutical compounds in recent years. The most significant change has been the extension to the naming of synthetic chemical substances of the practice previously used for substances originating in or derived from natural products. This practice involves employing a characteristic "stem" indicative of a common property of the members of a group. The reasons for, and the implications of, the change are fully discussed.

6. The use of an isolated letter or number should be avoided; hyphenated construction is also undesirable.

7. To facilitate the translation and pronunciation of INN, "f" should be used instead of "ph", "t" instead of "th", "e" instead of "ae" or "oe", and "i" instead of "y"; the use of the letters "h" and "k" should be avoided.

8. Provided that the names suggested are in accordance with these principles, names proposed by the person discovering or first developing and marketing a pharmaceutical preparation, or names already officially in use in any country, should receive preferential consideration.

9. Group relationship in INN (see Guiding Principle 2) should if possible be shown by using a common stem. The following list contains examples of stems for groups of substances, particularly for new groups. There are many other stems in active use.[1] Where a stem is shown without any hyphens it may be used anywhere in the name.

Latin	*English*	
-acum	-ac	anti-inflammatory agents of the ibufenac group
-actidum	-actide	synthetic polypeptides with a corticotrophin-like action
-adolum	-adol)	analgesics
-adol-	-adol-)	
-astum	-ast	anti-asthmatic, anti-allergic substances not acting primarily as antihistaminics
-astinum	-astine	antihistaminics
-azepamum	-azepam	substances of the diazepam group
-bactamum	-bactam	β-lactamase inhibitors
bol	bol	steroids, anabolic
-buzonum	-buzone	anti-inflammatory analgesics of the phenylbutazone group
-cain-	-cain-	antifibrillant substances with local anaesthetic activity
-cainum	-caine	local anaesthetics
cef-	cef-	antibiotics, derivatives of cefalosporanic acid
-cillinum	-cillin	antibiotics, derivatives of 6-aminopenicillanic acid
-conazolum	-conazole	systemic antifungal agents of the miconazole group
cort	cort	corticosteroids, except those of the prednisolone group
-dipinum	-dipine	calcium antagonists of the nifedipine group
-fibratum	-fibrate	substances of the clofibrate group
gest	gest	steroids, progestogens
gli-	gli-	sulfonamide hypoglycemics
io-	io-	iodine-containing contrast media
-ium	-ium	quaternary ammonium compounds
-metacinum	-metacin	anti-inflammatory substances of the indometacin group
-mycinum	-mycin	antibiotics, produced by *Streptomyces* strains
-nidazolum	-nidazole	antiprotozoal substances of the metronidazole group
-ololum	-olol	β-adrenergic blocking agents
-oxacinum	-oxacin	antibacterial agents of the nalidix acid group
-pridum	-pride	sulpiride derivatives
-pril(at)um	pril(at)	angiotensin-converting enzyme inhibitors
-profenum	-profen	anti-inflammatory substances of the ibuprofen group
prost	prost	prostaglandins
-relinum	-relin	hypophyseal hormone-release-stimulating peptides
-terolum	-terol	bronchodilators, phenethylamine derivates
-tidinum	-tidine	H_2-receptor antagonists
-trexatum	-trexate	folic acid antagonists
-verinum	-verine	spasmolytics with a papaverine-like action
vin-	vin-)	vinca type alkaloids
-vin-	-vin-)	

[1] A more extensive listing of stems is contained in the working document Pharm S/Nom 15 which is regularly updated and can be requested from Pharmaceuticals, WHO, Geneva.