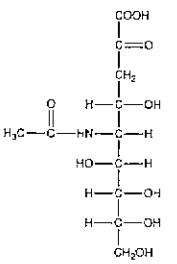
International Nonproprietary Names for Pharmaceutical Substances

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.

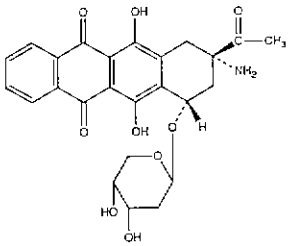
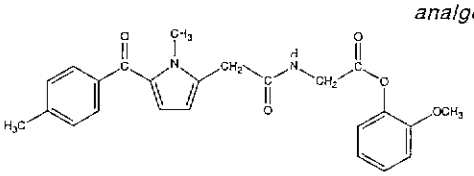
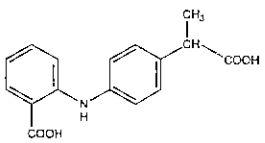
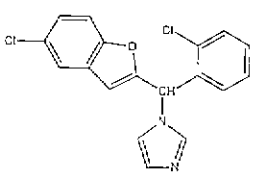
Comments on, or formal objections to, the proposed names may be forwarded by any person to the Pharmaceuticals Unit of the World Health Organization within four months of the date of their publication in *WHO Drug Information*, i.e., for **List 65 Prop. INN not later than 31 January 1992.**

Proposed International Nonproprietary Names: List 65

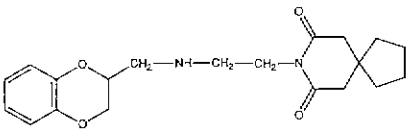
Lists of proposed (1–58) and recommended (1–27) international nonproprietary names can be found in Cumulative List No. 7, 1988.

Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic formulae Chemical Abstracts Service (CAS) registry number Action and Use**
acidum aceneuramicum aceneuramic acid	(–)-5-acetamido-3,5-dideoxy-D-*glycero*-D-*galacto*-nonulosonic acid $C_{11}H_{19}NO_9$ 131-48-6 *expectorant* 

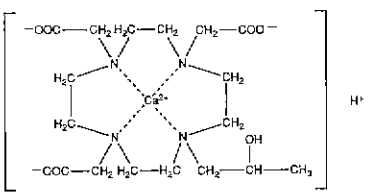
* *Action and Use: The statements in italics indicating the action and use are based largely on information supplied by the manufacturer. The information is meant to provide an indication of the potential use of new substances at the time they are accorded Proposed International Nonproprietary Names. 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*
amrubicinum amrubicin	(+)-(7*S*,9*S*)-9-acetyl-9-amino-7-[(2-deoxy-β-D-*erythro*-pentopyranosyl)oxy]-7,8,9,10-tetrahydro-6,11-dihydroxy-5,12-naphthacenedione $C_{25}H_{25}NO_9$ 110267-81-7 *antineoplastic* 
amtolmetinum guacilum amtolmetin guacil	*N*-[(1-methyl-5-*p*-toluoylpyrrol-2-yl)acetyl]glycine *o*-methoxyphenyl ester $C_{24}H_{24}N_2O_5$ 87344-06-7 *non-steroidal anti-inflammatory, analgesic* 
araprofenum araprofen	(±)-*p*-(*o*-carboxyanilino)hydratropic acid $C_{16}H_{15}NO_4$ 15250-13-2 *nonsteroidal anti-inflammatory, analgesic* 
becliconazolum becliconazole	(±)-1-[*o*-chloro-α-(5-chloro-2-benzofuranyl)benzyl]imidazole $C_{18}H_{12}Cl_2N_2O$ 112893-26-2 *antifungal* 

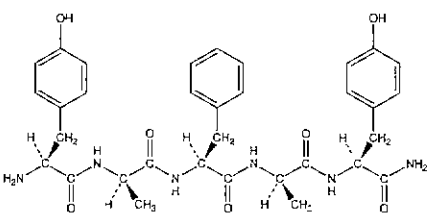
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae* *Chemical Abstracts Service (CAS) registry number* *Action and use*
binospironum binospirone	(±)-*N*-[2-[(1,4-benzodioxan-2-ylmethyl)amino]ethyl]-1,1-cyclopentanediacetimide $C_{20}H_{26}N_2O_4$ 102908-59-8 *anxiolytic*



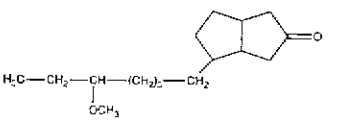
)eridolum .teridol	hydrogen [(±)-10-(2-hydroxypropyl)-1,4,7,10-tetraazacyclododecane-1,4,7-triacetato(3-)]calciate(1-) $C_{17}H_{30}CaN_4O_7$ 132722-73-7 *chelating agent*

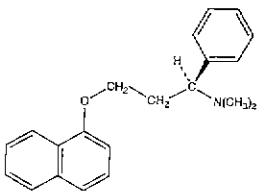
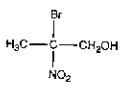
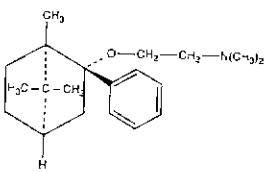
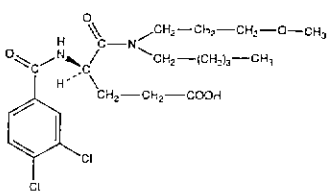
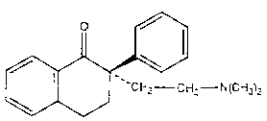


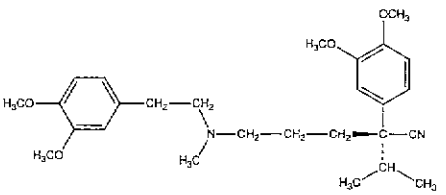
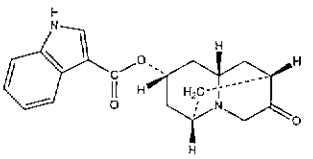
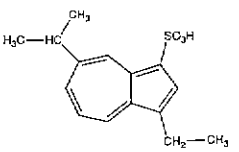
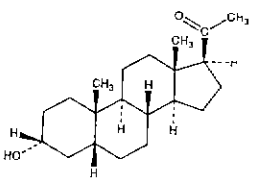
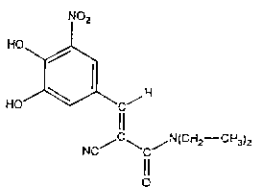
casokefamidum casokefamide	L-tyrosyl-D-alanyl-L-phenylalanyl-D-alanyl-L-tyrosinamide $C_{33}H_{40}N_6O_7$ 98815-38-4 *antidiarrhoeal*

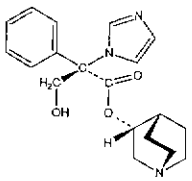
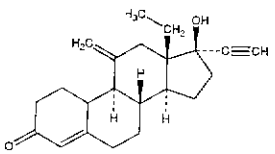
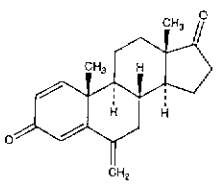
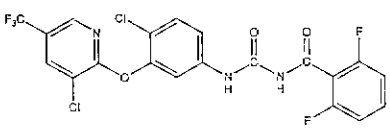
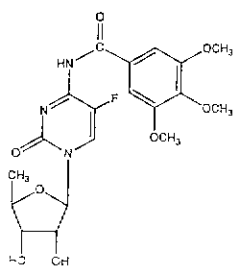


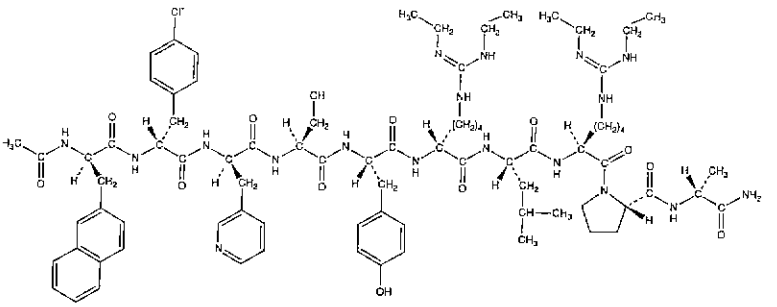
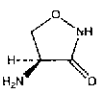
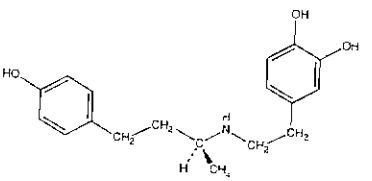
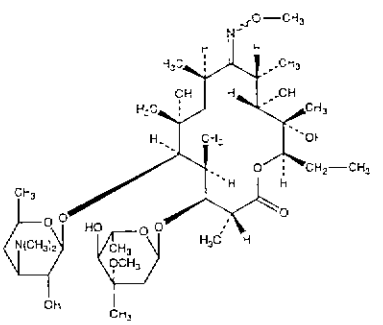
celmoleukinum celmoleukin	interleukin 2 (human clone pTIL2-21a, protein moiety) $C_{593}H_{1118}N_{178}O_{203}S_7$ 94218-72-1 *immunomodulator*
cioteronelum cioteronel	(±)-hexahydro-4-(5-methoxyheptyl)-2(1*H*)-pentalenone $C_{16}H_{28}O_2$ 89672-11-7 *antiandrogen*

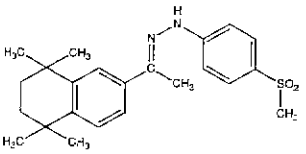
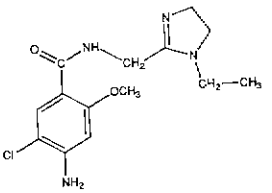
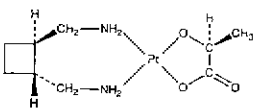
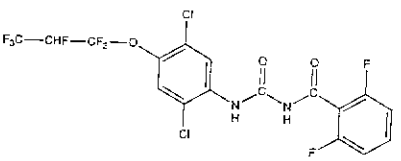
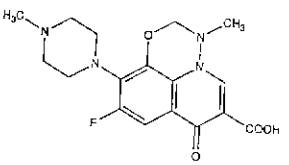


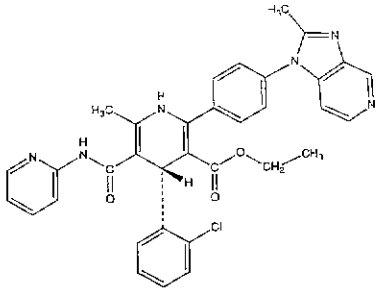
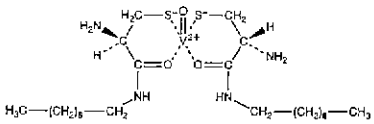
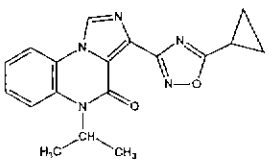
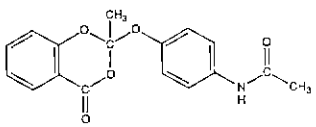
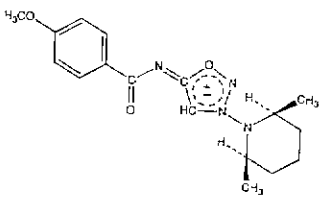
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description. Molecular and Graphic Formulae* *Chemical Abstracts Service (CAS) registry number* *Action and use*
dapoxetinum dapoxetine	(+)-(*S*)-*N*,*N*-dimethyl-α-[2-(1-naphthyloxy)ethyl]benzylamine $C_{21}H_{23}NO$ 119356-77-3 *antidepressant*
	
debropolum debropol	(±)-2-bromo-2-nitro-1-propanol $C_3H_6BrNO_3$ 24403-04-1 *antiseptic*
	
deramciclanum deramciclane	*N*,*N*-dimethyl-2-[[(1*R*,2*S*,4*R*)-2-phenyl-2-bornyl]oxy]ethylamine $C_{20}H_{31}NO$ 120444-71-5 *anxiolytic*
	
dexloxiglumidum dexloxiglumide	(*R*)-4-(3,4-dichlorobenzamido)-*N*-(3-methoxypropyl)-*N*-pentylglutaramic acid $C_{21}H_{30}Cl_2N_2O_5$ 119817-90-2 *cholecystokinin receptor antagonist*
	
dexnafenodonum dexnafenodone	(+)-(*S*)-2-[2-(dimethylamino)ethyl]-3,4-dihydro-2-phenyl-1(2*H*)-naphthalenone $C_{20}H_{23}NO$ 92629-87-3 *antidepressant*
	

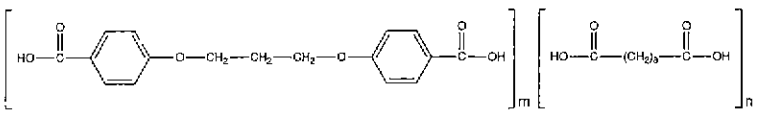
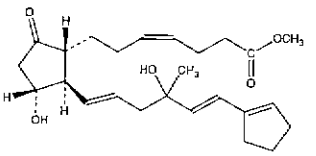
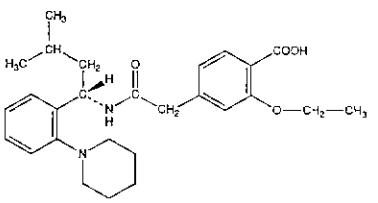
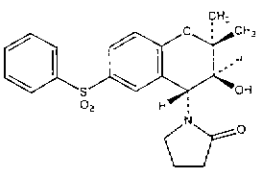
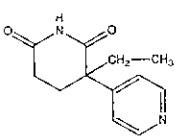
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description. Molecular and Graphic Formulae* *Chemical Abstracts Service (CAS) registry number* *Action and use*
dexverapamilum dexverapamil	(+)-(*R*)-5-[(3,4-dimethoxyphenethyl)methylamino]-2-(3,4-dimethoxyphenyl)-2-isopropylvaleronitrile $C_{27}H_{38}N_2O_4$ 38321-02-7 *calcium channel blocker* 
dolasetronum dolasetron	indole-3-carboxylic acid, ester with (8*r*)-hexahydro-8-hydroxy-2,6-methano-2*H*-quinolizin-3(4*H*)-one $C_{19}H_{20}N_2O_3$ 115956-12-2 *serotonin receptor antagonist* 
egualenum egualen	3-ethyl-7-isopropyl-1-azulenesulfonic acid $C_{15}H_{18}O_3S$ 99287-30-6 *antiulcer* 
eltanolonum eltanolone	3α-hydroxy-5β-pregnan-20-one $C_{21}H_{34}O_2$ 128-20-1 *anaesthetic* 
entacaponum entacapone	(*E*)-α-cyano-*N*,*N*-diethyl-3,4-dihydroxy-5-nitrocinnamamide $C_{14}H_{15}N_3O_5$ 130929-57-6 *antiparkinsonian* 

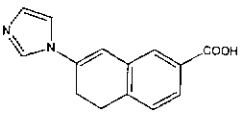
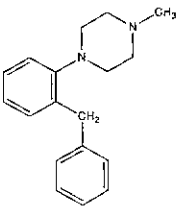
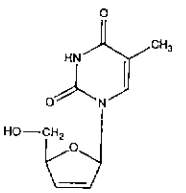
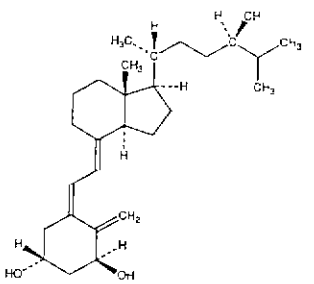
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae* *Chemical Abstracts Service (CAS) registry number* *Action and use*
espatropatum espatropate	(*R*)-3-quinuclidinyl (*R*)-α-(hydroxymethyl)-α-phenylimidazole-1-acetate $C_{19}H_{23}N_3O_3$ 132829-83-5 *bronchodilator* 
etonogestrelum etonogestrel	13-ethyl-17-hydroxy-11-methylene-18,19-dinor-17α-pregn-4-en-20-yn-3-one $C_{22}H_{28}O_2$ 54048-10-1 *progestogen* 
exemestanum exemestane	6-methyleneandrosta-1,4-diene-3,17-dione $C_{20}H_{24}O_2$ 107868-30-4 *antineoplastic* 
fluazuronum fluazuron	1-[4-chloro-3-[[3-chloro-5-(trifluoromethyl)-2-pyridyl]oxy]phenyl]-3-(2,6-difluorobenzoyl)urea $C_{20}H_{10}Cl_2F_5N_3O_3$ 86811-58-7 *antiparasitic (vet.)* 
galocitabinum galocitabine	*N*-[1-(5-deoxy-β-D-ribofuranosyl)-5-fluoro-1,2-dihydro-2-oxo-4-pyrimidinyl]-3,4,5-trimethoxybenzamide $C_{19}H_{22}FN_3O_8$ 124012-42-6 *antineoplastic* 

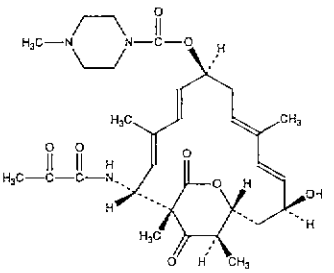
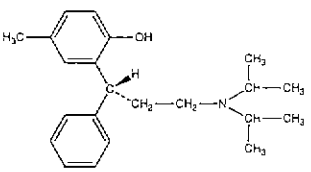
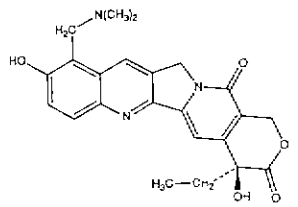
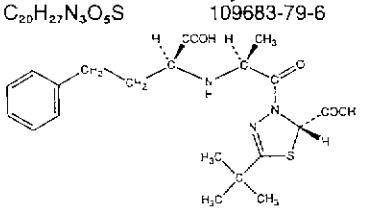
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae* *Chemical Abstracts Service (CAS) registry number* *Action and use*
ganirelixum ganirelix	*N*-acetyl-3-(2-naphthyl)-D-alanyl-*p*-chloro-D-phenylalanyl-3-(3-pyridyl)-D-alanyl-L-seryl-L-tyrosyl-N^6-(*N,N'*-diethylamidino)-D-lysyl-L-leucyl-N^6-(*N,N'*-diethylamidino)-L-lysyl-L-prolyl-D-alaninamide $C_{80}H_{113}ClN_{18}O_{13}$ 124904-93-4 *luteinizing-hormone-releasing-hormone antagonist*
	
levcycloserinum levcycloserine	(*S*)-4-amino-3-isoxazolidinone $C_3H_6N_2O_2$ 339-72-0 *glucocerebroside synthesis inhibitor*
	
levdobutaminum levdobutamine	4-[2-[[(*S*)-3-(*p*-hydroxyphenyl)-1-methylpropyl]amino]ethyl]pyrocatechol $C_{18}H_{23}NO_3$ 61661-06-1 *cardiac stimulant*
	
lexithromycinum lexithromycin	erythromycin 9-(*O*-methyloxime) $C_{38}H_{70}N_2O_{13}$ 53066-26-5 *antiviral*
	

Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae* *Chemical Abstracts Service (CAS) registry number* *Action and use*
linarotenum linarotene	5',6',7',8'-tetrahydro-5',5',8',8'-tetramethyl-2'-acetonaphthone (*E*)-[*p*-(methylsulfonyl)phenyl]hydrazone $C_{23}H_{30}N_2O_2S$ 127304-28-3 *dermatological* 
lintopridum lintopride	4-amino-5-chloro-*N*-[(1-ethyl-2-imidazolin-2-yl)methyl]-*o*-anisamide $C_{14}H_{19}ClN_4O_2$ 107429-63-0 *antiemetic* 
lobaplatinum lobaplatin	*cis*-[*trans*-1,2-cyclobutanebis(methylamine)][(*S*)-lactato-O^1,O^1]platinum $C_9H_{18}N_2O_3Pt$ 135558-11-1 *antineoplastic* 
lufenuronum lufenuron	1-[2,5-dichloro-4-(1,1,2,3,3,3-hexafluoropropoxy)phenyl]-3-(2,6-difluorobenzoyl)urea $C_{17}H_8Cl_2F_8N_2O_3$ 103055-07-8 *antiparasitic (vet.)* 
marbofloxacinum marbofloxacin	9-fluoro-2,3-dihydro-3-methyl-10-(4-methyl-1-piperazinyl)-7-oxo-7*H*-pyrido[3,2,1-*ij*][4,1,2]benzoxadiazine-6-carboxylic acid $C_{17}H_{19}FN_4O_4$ 115550-35-1 *antibiotic (vet.)* 
mirimostimum mirimostim	1-214-colony-stimulating factor 1 (human clone p3ACSF-69 protein moiety reduced), homodimer $C_{1058}H_{1651}N_{277}O_{341}S_{14}$ 121547-04-4 *immunomodulator* (for non-glycosylated protein)

Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae* *Chemical Abstracts Service (CAS) registry number* *Action and use*
modipafantum modipafant	ethyl (+)-(*R*)-4-(*o*-chlorophenyl)-1,4-dihydro-6-methyl-2-[*p*-(2-methyl-1*H*-imidazo[4,5-*c*]pyridin-1-yl)phenyl]-5-(2-pyridylcarbamoyl)nicotinate $C_{34}H_{29}ClN_6O_3$ 122957-06-6 *platelet-activating-factor antagonist*
	
naglivanum naglivan	bis[2-amino-3-mercapto-*N*-octylpropionamidato(1-)-*S*]oxovanadium $C_{22}H_{46}N_4O_3S_2V$ 122575-28-4 *antidiabetic*
	
panadiplonum panadiplon	3-(5-cyclopropyl-1,2,4-oxadiazol-3-yl)-5-isopropylimidazo[1,5-*a*]quinoxalin-4(5*H*)-one $C_{18}H_{17}N_5O_2$ 124423-84-3 *partial benzodiazepine receptor agonist*
	
parcetasalum parcetasal	(±)-4′-[(2-methyl-4-oxo-1,3-benzodioxan-2-yl)oxy]acetanilide $C_{17}H_{15}NO_5$ 87549-36-8 *non-steroidal anti-inflammatory, analgesic*
	
pirsidominum pirsidomine	*N*-*p*-anisoyl-3-(*cis*-2,6-dimethylpiperidino)sydnone imine $C_{17}H_{22}N_4O_3$ 132722-74-8 *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*
polifeprosanum polifeprosan	4,4′-(trimethylenedioxy)dibenzoic acid, polymer with sebacic acid $(C_{17}H_{16}O_6)_m\ (C_{16}H_{18}O_4)_n$ 90409-78-2 *pharmaceutical aid*
	
remiprostolum remiprostol	(±)-methyl (*Z*)-7-[(1*R*,2*R*,3*R*)-2-[(1*E*,5*E*)-(4*RS*)-6-(1-cyclopenten-1-yl)-4-hydroxy-4-methyl-1,5-hexadienyl]-3-hydroxy-5-oxocyclopentyl]-4-heptenoate $C_{25}H_{38}O_5$ 110845-89-1 *antiulcer*
	
repaglinidum repaglinide	(+)-2-ethoxy-α-[[(*S*)-α-isobutyl-*o*-piperidinobenzyl]carbamoyl]-*p*-toluic acid $C_{27}H_{36}N_2O_4$ 135062-02-1 *antidiabetic*
	
rilmakalimum rilmakalim	(+)-1-[(3*S*,4*R*)-3-hydroxy-2,2-dimethyl-6-(phenylsulfonyl)-4-chromanyl]-2-pyrrolidinone $C_{21}H_{23}NO_5S$ 132014-21-2 *potassium channel activator*
	
rogletimidum rogletimide	(±)-2-ethyl-2-(4-pyridyl)glutarimide $C_{12}H_{14}N_2O_2$ 121840-95-7 *antineoplastic*
	

Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description. Molecular and Graphic Formulae* *Chemical Abstracts Service (CAS) registry number* *Action and use*
rolafagrelum rolafagrel	5,6-dihydro-7-imidazol-1-yl-2-naphthoic acid $C_{14}H_{12}N_2O_2$ 89781-55-5 *thromboxane synthetase inhibitor* 
sifaprazinum sifaprazine	1-methyl-4-(α-phenyl-*o*-tolyl)piperazine $C_{18}H_{22}N_2$ 131635-06-8 *antidepressant* 
silteplasum silteplase	*N*-[*N*²-(*N*-glycyl-*L*-alanyl)-*L*-arginyl]plasminogen activator (human tissue-type protein moiety reduced), glycoform $C_{2580}H_{3948}N_{752}O_{784}S_{40}$ 131081-40-8 *thrombolytic* (for non-glycosylated protein)
stavudinum stavudine	1-(2,3-dideoxy-β-D-*glycero*-pent-2-enofuranosyl)thymine $C_{10}H_{12}N_2O_4$ 3056-17-5 *antiviral* 
tacalcitolum tacalcitol	(+)-(5*Z*,7*E*,24*R*)-9,10-secocholesta-5,7,10(19)-triene-1α,3β,24-triol $C_{27}H_{44}O_3$ 57333-96-7 *antipsoriatic* 

Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae* *Chemical Abstracts Service (CAS) registry number* *Action and use*
terdecamycinum terdecamycin	4-methyl-1-piperazinecarboxylic acid, 7-ester with (-)-*N*-[1*S*,2*R*,3*E*,5*E*,7*S*,9*E*,11*E*,13*S*,15*R*,19*R*)-7,13-dihydroxy-1,4,10,19-tetramethyl-17,18-dioxo-16-oxabicyclo[13.2.2]nonadeca-3,5,9,11-tetraen-2-yl]pyruvamide *or* (-)-*N*-[(1*S*,2*R*,3*E*,5*E*,7*S*,9*E*,11*E*,13*S*,15*R*,19*R*)-7,13-dihydroxy-1,4,10,19-tetramethyl-17,18-dioxo-16-oxabicyclo[13.2.2]nonadeca-3,5,9,11-tetraen-2-yl]pyruvamide 7-(4-methyl-1-piperazinecarboxylate) $C_{31}H_{43}N_3O_8$ 113167-61-6 *antibiotic* 
tinzaparinum natricum tinzaparin sodium	Sodium salt of depolymerized heparin obtained by heparinase from *Flavobacterium heparinum* (heparin lyase. EC 4.2.2.7) degradation of heparin from pork intestinal mucosa; the majority of the components have a 2-*O*-sulfo-4-enepyranosuronic acid structure at the non-reducing end and a 2-*N*,6-*O*-disulfo-D-glucosamine structure at the reducing end of their chain; the relative molecular mass is 4500 ± 1500, 70 per cent of which ranging between 1500 and 10 000; the degree of sulfatation is 2 to 2,5 per disaccharidic unit. *anticoagulant*
tolterodinum tolterodine	(+)-(*R*)-2-[α-[2-(diisopropylamino)ethyl]benzyl]-*p*-cresol $C_{22}H_{31}NO$ 124937-51-5 *muscarine receptor antagonist* 
topotecanum topotecan	(*S*)-10-[(dimethylamino)methyl]-4-ethyl-4,9-dihydroxy-1*H*-pyrano[3′,4′:6,7]indolizino[1,2-*b*]quinoline-3,14(4*H*,12*H*)-dione $C_{23}H_{23}N_3O_5$ 123948-87-8 *antineoplastic* 
utibaprilatum utibaprilat	(*S*)-2-*tert*-butyl-4-[(*S*)-N-[(*S*)-1-carboxy-3-phenylpropyl]alanyl-Δ^2-1,3,4-thiadiazoline-5-carboxylic acid $C_{20}H_{27}N_3O_5S$ 109683-79-6 *angiotensin-converting-enzyme inhibitor* 

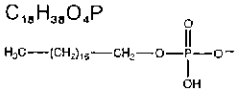
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae* *Chemical Abstracts Service (CAS) registry number* *Action and use*
verlukastum verlukast	3-[[(α*R*)-*m*-[(*E*)-2-(7-chloro-2-quinolyl)vinyl]-α-[[2-(dimethylcarbamoyl)ethyl]thio]benzyl]thio]propionic acid $C_{35}H_{37}ClN_2O_3S_2$ 120443-16-5 *antiasthmatic, antiallergic*
voglibosum voglibose	3,4-dideoxy-4-[[2-hydroxy-1-(hydroxymethyl)ethyl]amino]-2-*C*-(hydroxymethyl)-*D*-epi-inositol $C_{10}H_{21}NO_7$ 83480-29-9 *antidiabetic*

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.

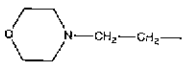
dofosfatum
dofosfate

octadecyl hydrogen phospate
$C_{18}H_{39}O_4P$



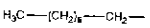
mofetilum
mofetil

2-morpholinoethyl
$C_6H_{12}NO$



octilum
octil

octyl
C_8H_{17}



AMENDMENTS TO PREVIOUS LISTS

WHO Chronicle Vol. 17, No. 10, 1963

Proposed International Nonproprietary Names (Prop. INN): List 13

p 393 galantaminum
galantamine

replace the chemical name by the following:

1,2,3,4,6,7,7a,11c-octahydro-9-methoxy-2-methylbenzofuro[3a,3,2-*ef*][2]-benzazepin-6-ol

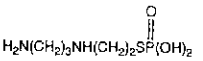
Supplement to WHO Chronicle, Vol. 34, No. 9, 1980

Proposed International Nonproprietary Names (Prop. INN): List 44

p 3 amifostinum
amifostine

replace the chemical name, the molecular formula, the graphic formula and the CAS registry number by the following:

S-[2-[(3-aminopropyl)amino]ethyl] dihydrogen phosphorothioate
$C_5H_{15}N_2O_3PS$ 20537-88-6



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

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

p 17 roxatidinum
roxatidine

insert the following CAS registry number:
78273-80-0

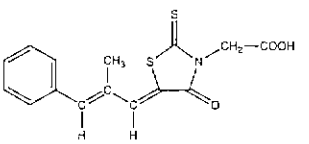
Supplement to WHO Chronicle, Vol. 40, No. 1, 1986

Proposed International Nonproprietary Names (Prop. INN): List 55

p. 7 epalrestatum
epalrestat

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

5-[(*Z,E*)-β-methylcinnamylidene]-4-oxo-2-thioxo-3-thiazolidineacetic acid



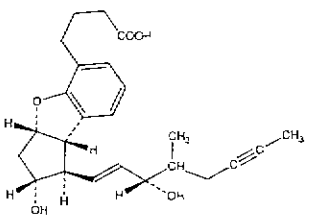
WHO Drug Information, Vol. 2, No. 2, 1988

Proposed International Nonproprietary Names (Prop. INN): List 59

p. 3 beraprostum
beraprost

replace the chemical name and graphical formula by the following:

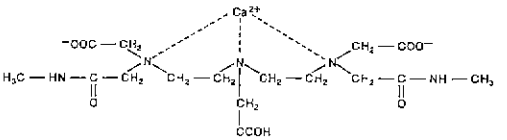
(±)-(1*R*,2*R*,3a*S*,8b*S*)-2,3,3a 8b-tetrahydro-2-hydroxy-1-[(*E*)-(3*S*,4*RS*)-3-hydroxy-4-methyl-1-octen-6-ynyl]-1*H*-cyclopenta[*b*]benzofuran-5-butyric acid



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

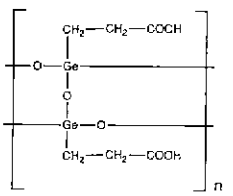
p. 3 caldiamidum
caldiamide

replace the graphical formula by the following.



p. 10 propagermanium
propagermanium

replace the graphical formula by the following:

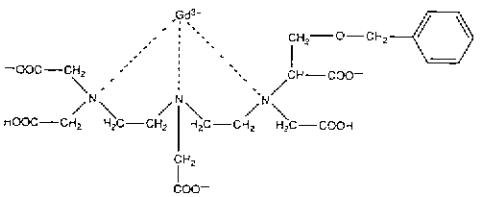


Proposed International Nonproprietary Names (Prop. INN): List 64

p. 2 acidum gadobenicum
gadobenic acid

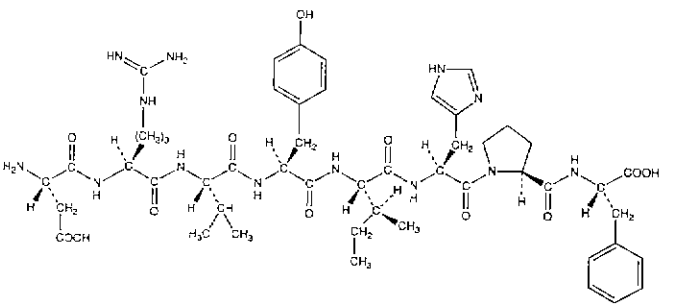
replace the chemical name and the graphic formula by the following:

dihydrogen [(±)-4-carboxy-5,8,11-tris(carboxymethyl)-1-phenyl-2-oxa-5,8,11-triazatridecan-13-oato(5-)]gadolinate(2-)



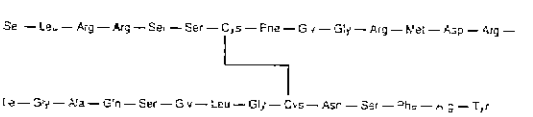
p. 3 angiotensinum II
angiotensin II

replace the graphic formula by the following:



p. 6 carperitidum
carperitide

replace the graphic formula by the following



p. 7 cefdaloximum
cefdaloxime

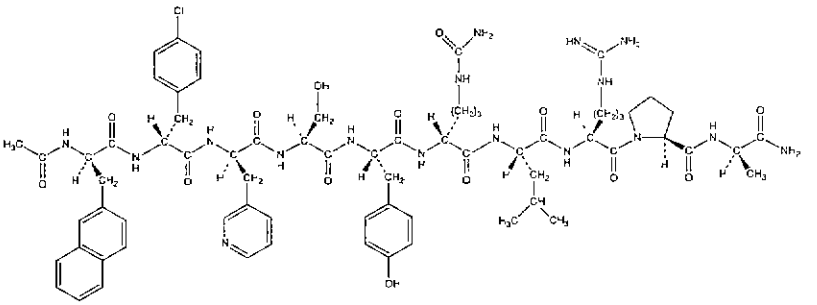
replace the chemical name by the following and insert the CAS registry number:

(+)-(6*R*,7*R*)-7-[2-(2-amino-4-thiazolyl)glyoxylamido]-3-(methoxymethyl)-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7²-(*Z*)-oxime
80195-36-4

cetrorelixum
cetrorelix

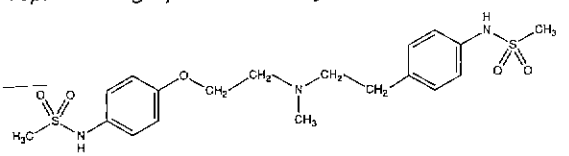
insert the CAS registry number and replace the graphic formula by the following:

120287-85-6



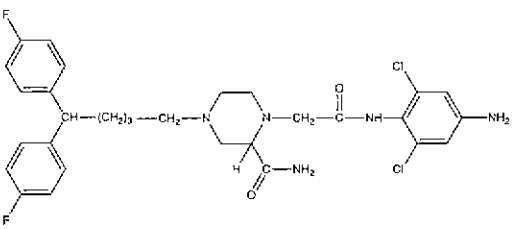
p. 9 dofetilidum
dofetilide

replace the graphic formula by the following:



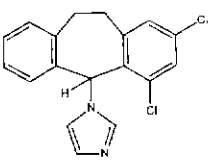
draflazinum
draflazine

replace the graphic formula by the following:



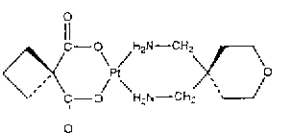
eberconazolum
eberconazole

replace the graphic formula by the following:



p. 10 enloplatinum
enloplatin

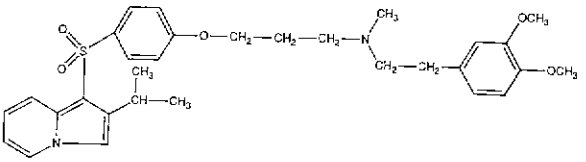
replace the graphic formula by the following.



p. 11 fantofaronum
fantofarone

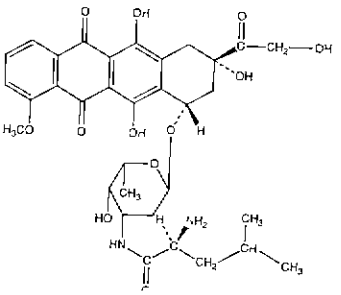
replace the graphical and the molecular formula by the following:

$C_{31}H_{38}N_2O_5S$



p 13 leurubicinum
leurubicin

replace the graphic formula by the following:



p. 14 loteprednolum
loteprednol

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

chloromethyl 11β,17-dihydroxy-3-oxoandrosta-1,4-diene-17β-carboxylate
$C_{21}H_{27}ClO_5$

p. 17 *delete*

nadroparinum calcium
nadroparin calcium

insert

nadroparinum calcicum
nadroparin calcium

p 18 parnaparinum natrium
parnaparin sodium

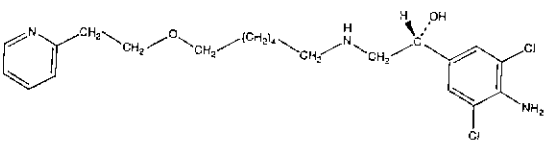
delete the whole entry

insert
parnaparinum natricum
parnaparin sodium

Sodium salt of depolymerized heparin obtained by hydrogen peroxide and cupric acetate degradation of heparin from bovine and pork intestinal mucosa, the majority of the components have a 2-*O*-sulfo-α-L-idopyranosuronic acid structure at the non-reducing end and a 2-*N*,6-*O*-disulfo-D-glucosamine structure at the reducing end of their chain; the average relative molecular mass is between 4000 and 6000 (5000 ± 20 per cent); the degree of sulfatation is 2,15 (± 10 per cent) per disaccharidic unit.
anticoagulant

p. 19 picumeterolum
picumeterol

replace the graphic formula by the following.



p 20 quinupristinum
quinupristin

replace the chemical name by the following:

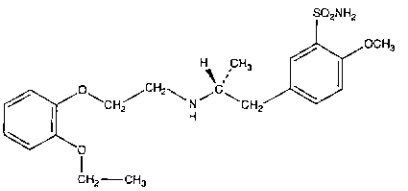
N-[(6*R*,9*S*,10*R*,13*S*,15a*S*,22*S*,24a*S*)-22-[*p*-(dimethylamino)benzyl]-6-ethyl-docosahydro-10,23-dimethyl-5,8,12,15,17,21,24-heptaoxo-13-phenyl-18-[[(3*S*)-quinuclidinylthio]methyl]-12*H*-pyrido[2,1-*f*]pyrrolo[2,1-*i*][1,4,7,10,13,16]oxa-pentaazacyclononadecin-9-yl]-3-hydroxypicolinamide

regramostimum
regramostim

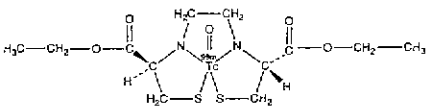
replace the molecular formula by the following:

$C_{637}H_{1003}N_{171}O_{197}S_8$

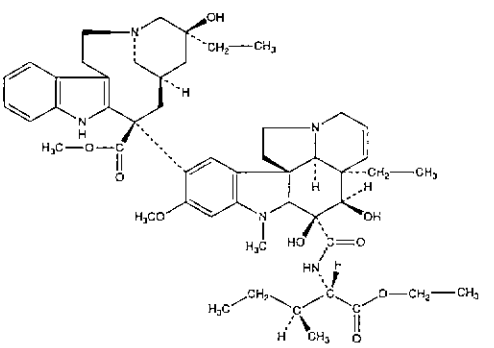
p. 20	*delete* reviparinum natrium reviparin sodium	*insert* reviparinum natricum reviparin sodium
p 22	tamsulosinum tamsulosin	*replace the graphic formula by the following:*



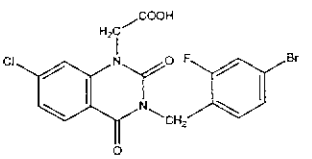
	technetii (^{99m}Tc) bicisas technetium (^{99m}Tc) bicisate	*replace the graphic formula by the following*



p. 23	terikalantum terikalant	*insert the following CAS registry number.* 121277-96-1
p. 24	vinleucinolum vinleucinol	*replace the chemical name and the graphic formula by the following, and insert the CAS registry number.* [23(1*S*,2*S*)]-4-deacetyl-3-[(1-carboxy-2-methylbutyl)carbamoyl]-3-de(methoxycarbonyl)vincaleukoblastine, ethyl ester 81571-28-0



p 25	zenarestatum zenarestat	*replace the graphic formula by the following.*



p. 26	*delete*	*insert*
	pivetilum pivetil	pentexilum pentexil
		replace the molecular formula by the following:
		$C_7H_{13}O_2$
p. 27	*delete*	*insert*
	enoxaparinum natrium enoxaparin sodium	enoxaparinum natricum enoxaparin sodium
p. 29	doramectinum doramectin	*replace the chemical name by the following:*
		25-cyclohexyl-5-*O*-demethyl-25-de(1-methylpropyl)avermectin A_{1a} *or* (2a*E*,4*E*,8*E*)-(5′*S*,6*S*,6′*R*,7*S*,11*R*,13*S*,15*S*,17a*R*,20*R*,20a*R*,20b*S*)-6′-cyclohexyl-5′,6,6′,7,10,11,14,15,17a,20,20a,20b-dodecahydro-20,20b-dihydroxy-5′,6,8,19-tetramethyl-17-oxospiro[11,15-methano-2*H*,13*H*,17*H*-furo-[4,3,2-*pq*][2,6]benzodioxacyclooctadecin-13,2′-[2*H*]pyran]-7-yl 2,6-dideoxy-4-*O*-(2,6-dideoxy-3-*O*-methyl-α-L-*arabino*-hexopyranosyl)-3-*O*-methyl-α-L-*arabino*-hexopyranoside

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 propretary 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 nonpropnetary 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	systematic 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 papavenne-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

International Nonproprietary Names (INN) for Pharmaceutical Substances Cumulative List No. 7

World Health Organization, Geneva, 1988
ISBN 92 4 0560149 price: Sw. fr. 65.–

This publication groups together all international nonproprietary names (INN) in Latin, English French, Russian and Spanish published up to March 1988, together with references to the lists of proposed and recommended INNs in which they have been published. It also includes references to other generic names, such as national nonproprietary names and names used by the International Organization of Standardization, pharmacopoeial monographs, the List of Narcotic Drugs under International Control, and other sources. Indexes of molecular formulae and of Chemical Abstracts Service registry numbers are also included.

The procedure for selecting recommended INNs is described and the general principles to be followed in devising these names are outlined. All the textual material published in this volume appears in both English and French.

These publications may be obtained from:
World Health Organization, Distribution and Sales Service,
1211 Geneva 27, Switzerland.