

International Nonproprietary Names for Pharmaceutical Substances

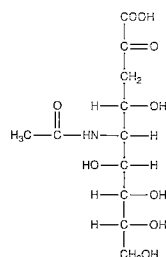
Notice is hereby given that, in accordance with article 3 of the Procedure for the Selection of Recommended International Nonproprietary Names for Pharmaceutical Substances (see Annexes), the following names are under consideration by the World Health Organization as Proposed International Nonproprietary 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.

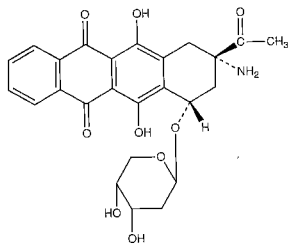
<i>Proposed International Nonproprietary Name (Latin, English)</i>	<i>Chemical Name or Description, Molecular and Graphic formulae Chemical Abstracts Service (CAS) registry number Action and Use*</i>
acidum aceneuramicum aceneuramic acid	(–)-5-acetamido-3,5-dideoxy- β -glycero- β -galacto-nonulosonic acid C ₁₁ H ₁₉ NO ₉ 131-48-6 <i>expectorant</i>



* *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.*

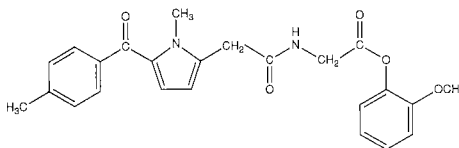
amrubicinum
amrubicin

(+)-(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*



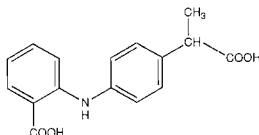
amtolmetinum guacilum
amtolmetin guacil

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*



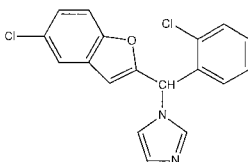
arapofenum
arapofen

(\pm)-*p*-(*o*-carboxyanilino)hydratropic acid
 $C_{16}H_{15}NO_4$ 15250-13-2 *nonsteroidal anti-inflammatory, analgesic*



becliconazolum
becliconazole

(\pm)-1-[*o*-chloro- α -(5-chloro-2-benzofuranyl)benzyl]imidazole
 $C_{18}H_{12}Cl_2N_2O$ 112893-26-2 *antifungal*

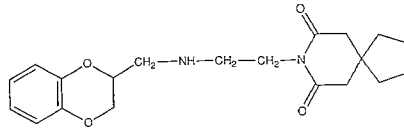


Proposed International
Nonproprietary Name (Latin, English)

Chemical Name or Description, Molecular and Graphic Formulae
Chemical Abstracts Service (CAS) registry number
Action and use

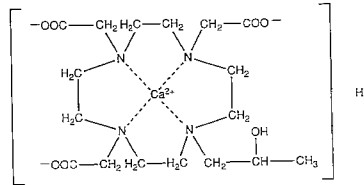
binospironum
binospirone

(±)-N-[2-[(1,4-benzodioxan-2-ylmethyl)amino]ethyl]-1,1-cyclopentane-
diacetamide
C₂₀H₂₆N₂O₄ 102908-59-8 *anxiolytic*



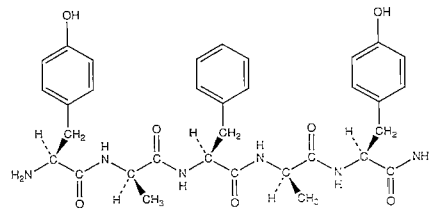
calteridolum
calteridol

hydrogen [(±)-10-(2-hydroxypropyl)-1,4,7,10-tetraazacyclododecane-1,4,7-
triacetato(3-)]calcite(1-)
C₁₇H₃₀CaN₄O₇ 132722-73-7 *chelating agent*



casokefamidum
casokefamide

L-tyrosyl-D-alanyl-L-phenylalanyl-D-alanyl-L-tyrosinamide
C₃₃H₄₀N₆O₇ 98815-38-4 *antidiarrhoeal*

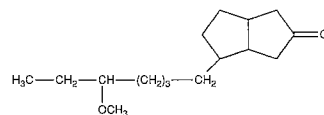


celmoleukinum
celmoleukin

interleukin 2 (human clone pTIL2-21a, protein moiety)
C₆₉₃H₁₁₁₆N₁₇₈O₂₀₃S₇ 94218-72-1 *immunomodulator*

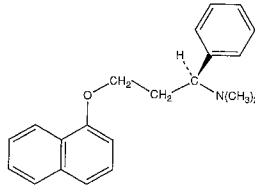
cioteronelum
cioteronel

(±)-hexahydro-4-(5-methoxyheptyl)-2(1H)-pentalenone
C₁₆H₂₈O₂ 89672-11-7 *antiandrogen*



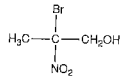
dapoxetine
dapoxetine

(+)-(S)-N,N-dimethyl-*a*-[2-(1-naphthoxy)ethyl]benzylamine
C₂₁H₂₃NO 119356-77-3 antidepressant



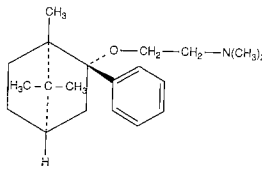
debropolum
debropol

(±)-2-bromo-2-nitro-1-propanol
C₃H₆BrNO₃ 24403-04-1 antiseptic



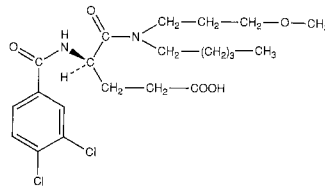
deramciclanum
deramciclane

N,N-dimethyl-2-[[1*R*,2*S*,4*R*]-2-phenyl-2-bornyl]oxy]ethylamine
C₂₀H₃₁NO 120444-71-5 anxiolytic



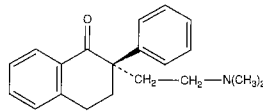
dexloxiglumidum
dexloxiglumide

(*R*)-4-(3,4-dichlorobenzamido)-*N*-(3-methoxypropyl)-*N*-pentylglutaramic acid
C₂₁H₃₀Cl₂N₂O₅ 119817-90-2 cholecystokinin receptor antagonist



dexnafenodonom
dexnafenodone

(+)-(S)-2-[2-(dimethylamino)ethyl]-3,4-dihydro-2-phenyl-1(2*H*)-naphthalenone
C₂₀H₂₃NO 92629-87-3 antidepressant

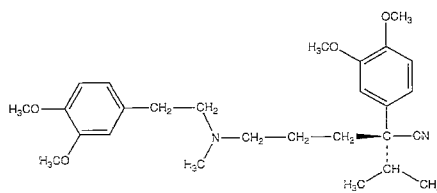


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Chemical Abstracts Service (CAS) registry number
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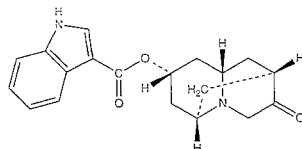
dexverapamilum
dexverapamil

(+)-(R)-5-[(3,4-dimethoxyphenethyl)methylamino]-2-(3,4-dimethoxyphenyl)-
isopropylvaleronitrile
C₂₇H₃₈N₂O₄ 38321-02-7 calcium channel blocker



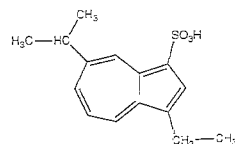
dolasetronum
dolasetron

indole-3-carboxylic acid, ester with (8*r*)-hexahydro-8-hydroxy-2,6-methano-
2*H*-quinolizin-3(4*H*)-one
C₁₉H₂₀N₂O₃ 115956-12-2 serotonin receptor antagonist



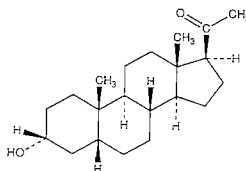
egualenum
egualen

3-ethyl-7-isopropyl-1-azulenesulfonic acid
C₁₅H₁₈O₃S 99287-30-6 antiulcer



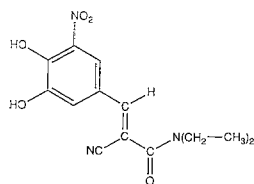
eitanolonum
eitanolone

3α-hydroxy-5β-pregnan-20-one
C₂₁H₃₄O₂ 128-20-1 anaesthetic



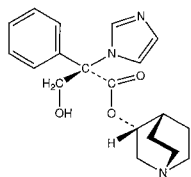
entacaponum
entacapone

(*E*)-α-cyano-*N,N*-diethyl-3,4-dihydroxy-5-nitrocinnamamide
C₁₄H₁₅N₃O₅ 130929-57-6 antiparkinsonian



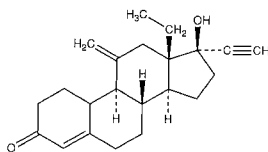
espatropatum
espatropate

(*R*)-3-quinuclidinyl (*R*)- α -(hydroxymethyl)- α -phenylimidazole-1-acetate
C₁₉H₂₃N₃O₃ 132829-83-5 *bronchodilator*



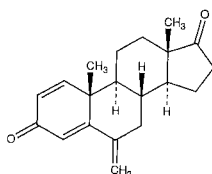
etonogestrelum
etonogestrel

13-ethyl-17-hydroxy-11-methylene-18,19-dinor-17 α -pregn-4-en-20-yn-3-one
C₂₂H₂₈O₂ 54048-10-1 *progestogen*



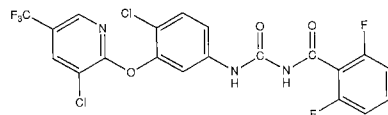
exemestanum
exemestane

6-methyleneandrosta-1,4-diene-3,17-dione
C₂₀H₂₄O₂ 107868-30-4 *antineoplastic*



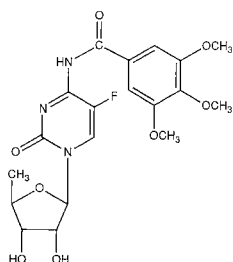
fluazuronum
fluazuron

1-[4-chloro-3-[[3-chloro-5-(trifluoromethyl)-2-pyridyl]oxy]phenyl]-3-(2,6-difluorobenzoyl)urea
C₂₀H₁₀Cl₂F₅N₃O₃ 86811-58-7 *antiparasitic (vet.)*



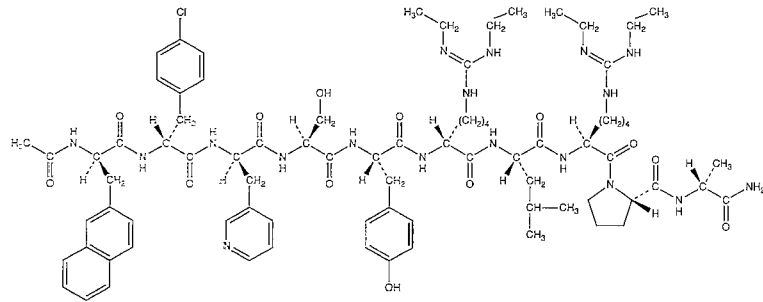
galocitabinum
galocitabine

N-[1-(5-deoxy- β -D-ribofuranosyl)-5-fluoro-1,2-dihydro-2-oxo-4-pyrimidinyl]-3,4,5-trimethoxybenzamide
C₁₉H₂₂FN₃O₈ 124012-42-6 *antineoplastic*



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
C₆₀H₁₁₃ClN₁₈O₁₃ 124904-93-4 *lutetizing-hormone-releasing-hormone antagonist*



levcycloserinum
levcycloserine

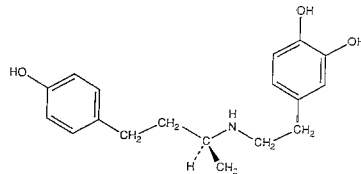
(*S*)-4-amino-3-isoxazolidinone
C₃H₆N₂O₂ 339-72-0

glucocerebroside synthesis inhibitor



levdobutaminum
levdobutamine

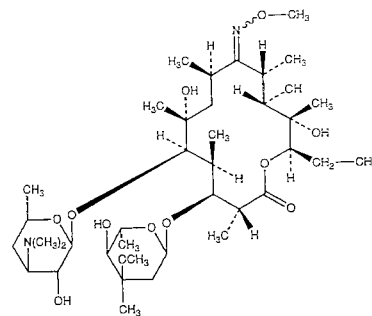
4-[2-[[(*S*)-3-(*p*-hydroxyphenyl)-1-methylpropyl]amino]ethyl]pyrocatechol
C₁₈H₂₃NO₃ 61661-06-1 *cardiac stimulant*



lexithromycinum
lexithromycin

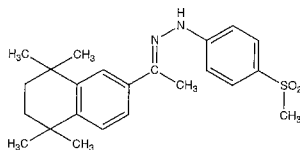
erythromycin 9-(*O*-methoxime)
C₃₈H₇₀N₂O₁₃ 53066-26-5

antiviral



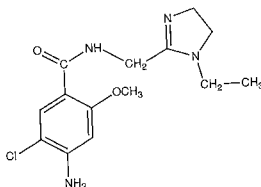
linarotenum
linarotene

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*



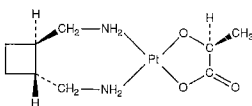
lintopridum
lintopride

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*



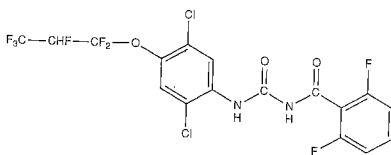
lobaplatinum
lobaplatin

cis-[*trans*-1,2-cyclobutanebis(methylamine)][(*S*)-lactato-*O*¹,*O*¹]platinum
 $C_9H_{18}N_2O_3Pt$ 135558-11-1 *antineoplastic*



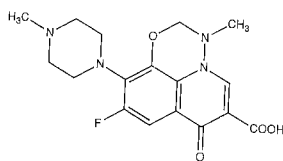
lufenuronum
lufenuron

1-[2,5-dichloro-4-(1,1,2,3,3,3-hexafluoropropoxy)phenyl]-3-(2,6-difluoro-
benzoyl)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.)*

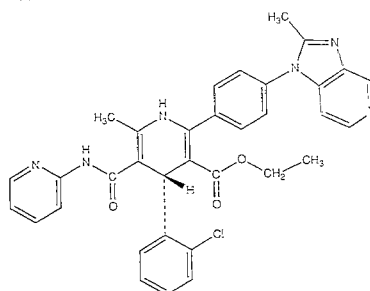


mirimostimum
mirimostim

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)

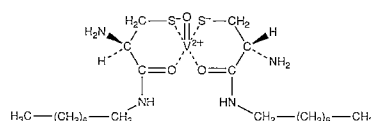
modipafantum
modipafant

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*



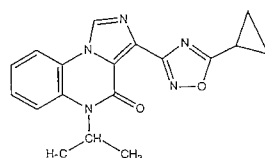
naglivanum
naglivan

bis[2-amino-3-mercapto-*N*-octylpropionamidato(1-)-*S*]oxovanadium
 $C_{22}H_{46}N_4O_3S_2V$ 122575-28-4 *antidiabetic*



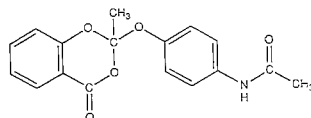
panadiplonum
panadiplon

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*



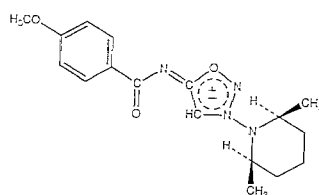
parcetasalum
parcetasal

(±)-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*



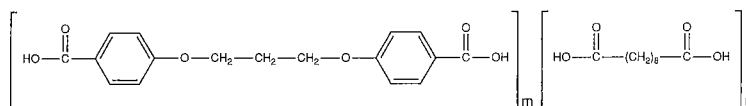
pirsidominum
pirsidomine

N-*p*-anisoyl-3-(*cis*-2,6-dimethylpiperidino)sydnone imine
 $C_{17}H_{22}N_4O_3$ 132722-74-8 *cardiac stimulant*



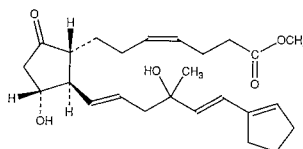
polifeprosanum
polifeprosan

4,4'-(trimethylenedioxy)dibenzoic acid, polymer with sebacic acid
(C₁₇H₁₆O₆)_m·(C₁₀H₁₈O₄)_n 90409-78-2 *pharmaceutical aid*



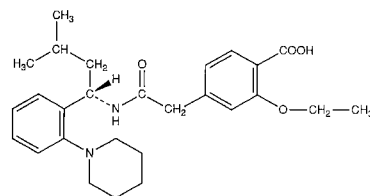
remiprostolum
remiprostol

(±)-methyl (Z)-7-[(1R,2R,3R)-2-[(1E,5E)-(4RS)-6-(1-cyclopenten-1-yl)-4-hydroxy-4-methyl-1,5-hexadienyl]-3-hydroxy-5-oxocyclopentyl]-4-heptenoate
C₂₅H₃₆O₅ 110845-89-1 *antiulcer*



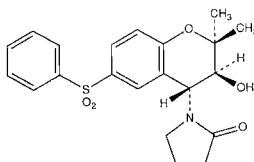
repaglinidum
repaglinide

(+)-2-ethoxy-α-[[[(S)-α-isobutyl-o-piperidinobenzyl]carbamoyl]-p-toluic acid
C₂₇H₃₆N₂O₄ 135062-02-1 *antidiabetic*



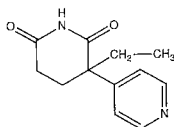
rilmakalimum
rilmakalim

(+)-1-[(3S,4R)-3-hydroxy-2,2-dimethyl-6-(phenylsulfonyl)-4-chromanyl]-2-pyrrolidinone
C₂₁H₂₃NO₅S 132014-21-2 *potassium channel activator*



rogletimidum
rogletimide

(±)-2-ethyl-2-(4-pyridyl)glutarimide
C₁₂H₁₄N₂O₂ 121840-95-7 *antineoplastic*

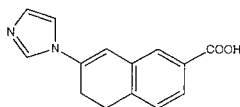


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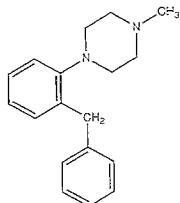
rolafagrelum
rolafagrel

5,6-dihydro-7-imidazol-1-yl-2-naphthoic acid
C₁₄H₁₂N₂O₂ 89781-55-5 *thromboxane synthetase inhibitor*



sifaprazinum
sifaprazine

1-methyl-4-(α -phenyl-*o*-tolyl)piperazine
C₁₈H₂₂N₂ 131635-06-8 *antidepressant*

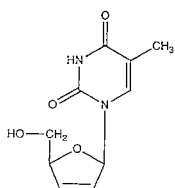


silteplasm
silteplase

N-[*N*²-(*N*-glycyl-*L*-alanyl)-*L*-arginyl]plasminogen activator (human tissue-type protein moiety reduced), glycoform
C₂₅₈₀H₃₉₄₈N₇₅₂O₇₈₄S₄₀ 131081-40-8 *thrombolytic*
(for non-glycosylated protein)

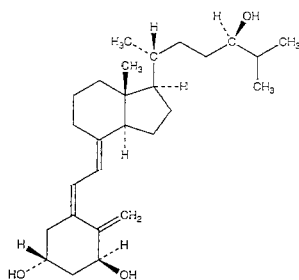
stavudinum
stavudine

1-(2,3-dideoxy- β -*D*-glycero-pent-2-enofuranosyl)thymine
C₁₀H₁₂N₂O₄ 3056-17-5 *antiviral*



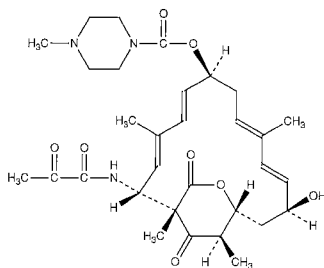
tacalcitolum
tacalcitol

(+)-(5*Z*,7*E*,24*R*)-9,10-secocholesta-5,7,10(19)-triene-1 α ,3 β ,24-triol
C₂₇H₄₄O₃ 57333-96-7 *antipsoriatic*



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)
C₃₁H₄₃N₃O₈ 113167-61-6 antibiotic



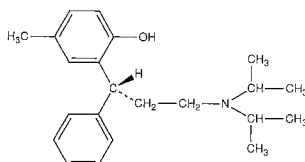
tinzaparinum natricum
tinzaparin sodium

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- β -glucosamine structure at the reducing end of their chain; the relative molecular mass is 4500 \pm 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

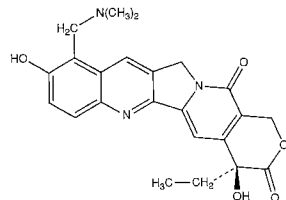
tolterodinum
tolterodine

(+)-(*R*)-2-[α -[2-(diisopropylamino)ethyl]benzyl]-*p*-cresol
C₂₂H₃₁NO 124937-51-5 muscarine receptor antagonist



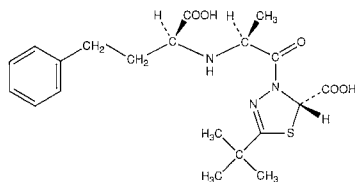
topotecanum
topotecan

(*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
C₂₃H₂₃N₃O₅ 123948-87-8 antineoplastic



utibaprilatum
utibaprilat

(*S*)-2-*tert*-butyl-4-[(*S*)-*N*-[(*S*)-1-carboxy-3-phenylpropyl]alananyl- Δ^2 -1,3,4-thiadiazoline-5-carboxylic acid
C₂₀H₂₇N₃O₅S 109683-79-6 angiotensin-converting-enzyme inhibitor

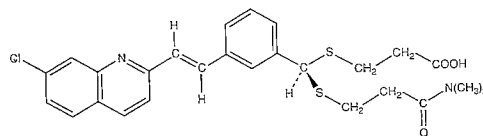


Proposed International
Nonproprietary Name (Latin, English)

Chemical Name or Description, Molecular and Graphic Formulae
Chemical Abstracts Service (CAS) registry number
Action and use

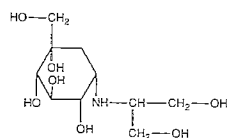
verlukastum
verlukast

3-[[(αR) - m -[(E)-2-(7-chloro-2-quinoly)vinyl]- α -[[2-(dimethylcarbamoyl)ethyl]thio]benzyl]thio]propionic acid
 $C_{26}H_{27}ClN_2O_3S_2$ 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*



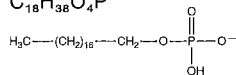
Names for Radicals and Groups

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 phosphate

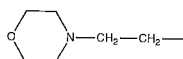
$C_{18}H_{36}O_4P$



mofetilum
mofetil

2-morpholinoethyl

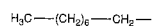
$C_6H_{12}NO$



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

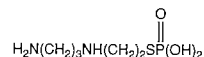
Supplement to WHO Chronicle, Vol. 34, No. 9, 1980

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
C₅H₁₅N₂O₃PS 20537-88-6



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

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

p. 17 roxatidinum
roxatidine

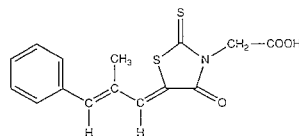
insert the following CAS registry number:
78273-80-0

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



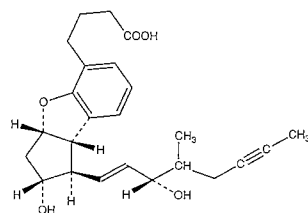
WHO Drug Information, Vol. 2, No. 2, 1988

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

p. 3 beraprostum
beraprost

replace the chemical name and graphical formula by the following:

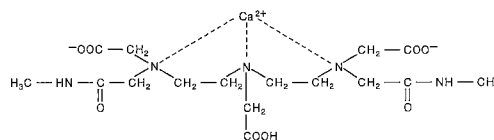
(±)-(1R,2R,3aS,8bS)-2,3,3a,8b-tetrahydro-2-hydroxy-1-[(E)-(3S,4R)-3-hydroxy-
4-methyl-1-octen-6-ynyl]-1H-cyclopenta[b]benzofuran-5-butyrlic acid



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

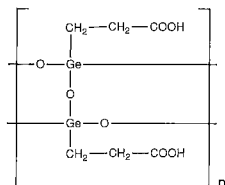
p. 3 caldiamidum
caldiamide

replace the graphical formula by the following:



p. 10 propagermanium
propagermanium

replace the graphical formula by the following:

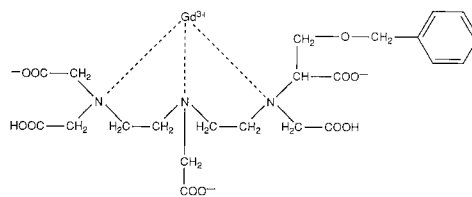


Proposed International Nonproprietary Names (Prop. INN): List 64

p. 2 acidum gadobenicum
gadobenic acid

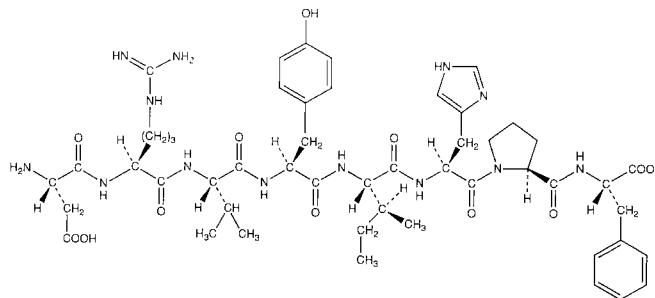
replace the chemical name and the graphic formula by the following:

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



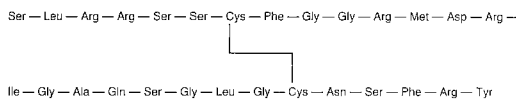
p. 3 angiotensinum II
angiotensin II

replace the graphic formula by the following:



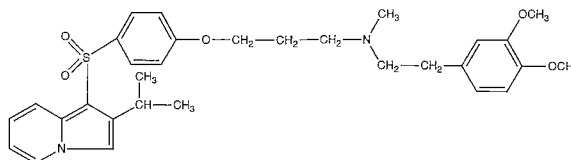
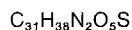
p. 6 carperitidum
carperitide

replace the graphic formula by the following:



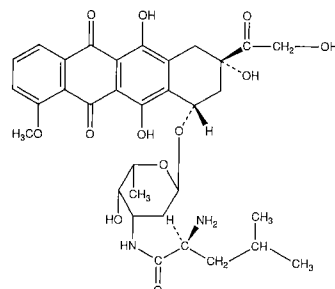
p. 11 fantofaronum
fantofarone

replace the graphical and the molecular formula by the following:



p. 13 leurbicinum
leurbicin

replace the graphic formula by the following:



p. 14 loteprednolum
loteprednol

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

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

p. 17 delete
nadroparinum calcium
nadroparin calcium

insert
nadroparinum calcium
nadroparin calcium

p. 18 parnaparinum natrium
parnaparin sodium

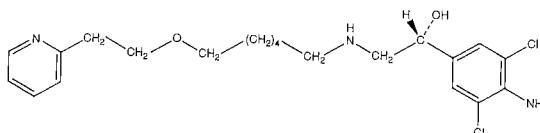
delete the whole entry

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:



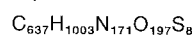
p. 20 quinupristinum
quinupristin

replace the chemical name by the following:

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

regramostimum
regramostim

replace the molecular formula by the following:

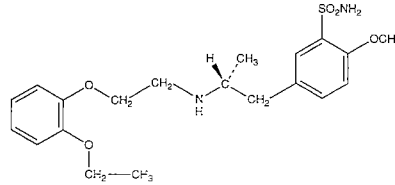


p. 20 *delete*
reviparinum natrium
reviparin sodium

insert
reviparinum natricum
reviparin sodium

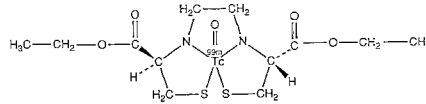
p. 22 tamsulosin
tamsulosin

replace the graphic formula by the following:



technetii (^{99m}Tc) bicasas
technetium (^{99m}Tc) bicasate

replace the graphic formula by the following:



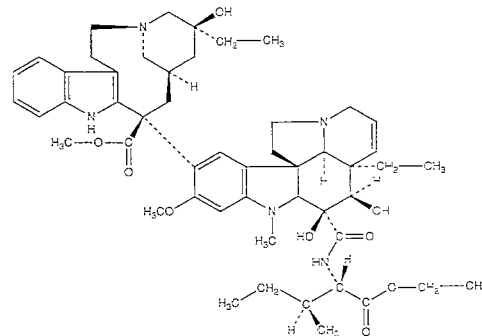
p. 23 terikalantum
terikalant

insert the following CAS registry number:
121277-96-1

p. 24 vinleucinolum
vinleucinol

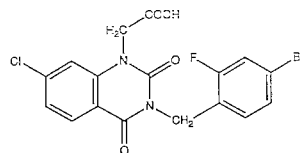
replace the chemical name and the graphic formula by the following, and insert the CAS registry number:

[23(1S,2S)]-4-deacetyl-3-[(1-carboxy-2-methylbutyl)carbamoyl]-3-de(methoxycarbonyl)vincalukoblastine, ethyl ester
81571-28-0



p. 25 zenarestatum
zenarestat

replace the graphic formula by the following:



p. 26 *delete*
pivetilum
pivetil

insert
pentexilum
pentexil

replace the molecular formula by the following:



p. 27 *delete*
enoxaparinum natrium
enoxaparin sodium

insert
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
(2*aE*,4*E*,8*E*)-(5'*S*,6*S*,6'*R*,7*S*,11*R*,13*S*,15*S*,17*aR*,20*R*,20*aR*,20*bS*)-6'-cyclohexyl-
5',6,6',7,10,11,14,15,17*a*,20,20*a*,20*b*-dodecahydro-20,20*b*-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 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.

<i>Latin</i>	<i>English</i>	
-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
-buzonium	-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 cephalosporanic acid
-cillinum	-cillin	antibiotics, derivatives of 6-aminopenicillanic acid
-conazolom	-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 <i>Streptomyces</i> strains
-nidazolom	-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 derivatives
-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.

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

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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.

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