Supplement to
WHO Chronicle, 1985
Vol. 39 (May)

International Nonproprietary Names for Pharmaceutical Substances

In accordance with article 3 of the Procedure for the Selection of Recommended International Nonproprietary Names for Pharmaceutical Substances,[1] notice is hereby given that the following names are under consideration by the World Health Organization as Proposed International Nonproprietary Names.

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 the *WHO Chronicle*, e.g., for List 53 Prop. INN not later than 30 September 1985.

The inclusion of a name in the lists of proposed international nonproprietary names does not imply any recommendation for the use of the substance in medicine or pharmacy.

Proposed International Nonproprietary Names (Prop. INN): List 53[2]

Comprehensive information on the INN programme can be found in: WHO Technical Report Series, No. 581, 1975 (*Nonproprietary Names for Pharmaceutical Substances*. Twentieth Report of the WHO Expert Committee), ISBN 92 4 120581 4 (price: Sw fr 6.–); an account of this publication will be found on page 25 of this Supplement (Annex 2). All names from Lists 1–47 of Proposed International Nonproprietary Names, together with a molecular formula index, will be found in: *International Nonproprietary Names (INN) for Pharmaceutical Substances Cumulative List No 6*, 1982, World Health Organization, Geneva (ISBN 92 4 056013 0) (price: Sw. fr. 55.–) This publication consists, in the main, of a computer printout which groups together all the proposed and recommended international nonproprietary names (INN)—in Latin, English, French, Russian, and Spanish—published up to April 1982. The printout also indicates in which of the 47 individual lists of proposed names and 21 lists of recommended names each INN was originally published, and gives references to national nonproprietary names, pharmacopoeia monographs, and other sources. In addition, the list contains molecular formulae and Chemical Abstracts Service registry numbers. For easy reference, national nonproprietary names that differ from INN, molecular formulae, and Chemical Abstracts Service registry numbers are indexed in a series of annexes. A final annex describes the procedure for selecting recommended INN and outlines the general principles to be followed in devising these names. All the textual material published in this volume appears in both English and French.

These publications may be obtained, direct or through booksellers, from the sales agents listed on the back cover of the *WHO Chronicle* Orders from countries where sales agents have not yet been appointed may be addressed to World Health Organization, Distribution and Sales Service, 1211 Geneva 27, Switzerland

[1] See Annex 1, p. 23

[2] Other lists of proposed and recommended international nonproprietary names can be found in *Cumulative List No. 6*, 1982.

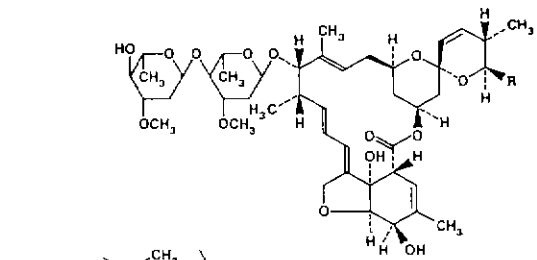
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae Chemical Abstracts Service (CAS) registry number*
abamectinum abamectin	A mixture of components B1a and B1b

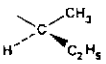
Component B1a:

(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′-[(*S*)-*sec*-butyl]-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-di-deoxy-3-*O*-methyl-α-L-*arabino*-hexopyranosyl)-3-*O*-methyl-α-L-*arabino*-hexopyranoside
$C_{48}H_{72}O_{14}$ 65195-55-3

Component B1b:

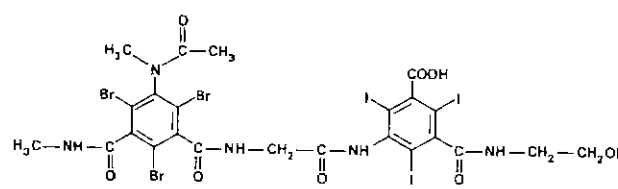
(2a*E*,4*E*,8*E*)-(5′*S*,6*S*,6′*R*,7*S*, 11*R*,13*S*,15*S*,17a*R*,20*R*,20a*R*,20b*S*)-5′,6,6′,7,10,11,14,15,17a,20,20a,20b-dodecahydro-20,20b-dihydroxy-6′-isopropyl-5′,6,8,19-tetramethyl-17-oxospiro[11,15-methano-2*H*,13*H*,17*H*-furo[4,3,2-*pq*][2,6]benzodioxacyclooctadecin-13,2′-[2*H*]pyran]-7-yl 2,6-dideoxy-4-*O*-(2,6-dideoxy-3-*O*-methyl-α-L-*arabino*-hexopyranosyl)-3-*O*-methyl-α-L-arabino-hexopyranoside
$C_{47}H_{70}O_{14}$ 65195-56-4



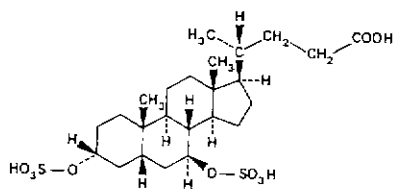
B1a · R =  80%

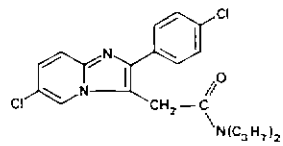
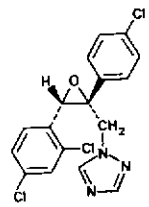
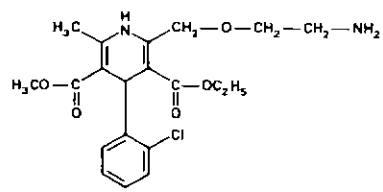
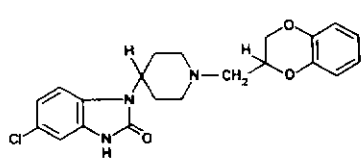
B1b · R = $-CH(CH_3)_2$ 20%

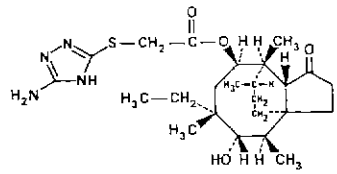
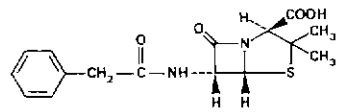
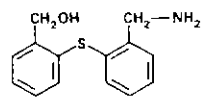
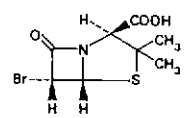
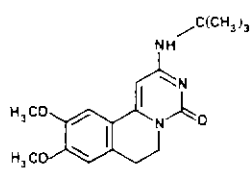
acidum ioxabrolicum ioxabrolic acid	*N*-(2-hydroxyethyl)-2,4,6-triiodo-5-[2-[2,4,6-tribromo-3-(*N*-methylacetamido)-5-(methylcarbamoyl)benzamido]acetamido]isophthalamic acid $C_{24}H_{21}Br_3I_3N_5O_8$ 96191-65-0

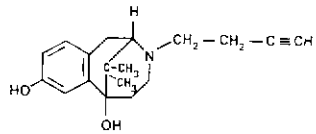
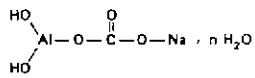
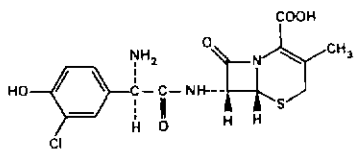
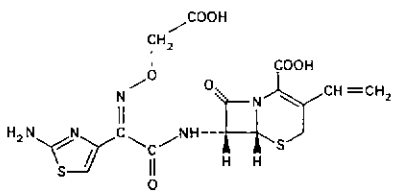
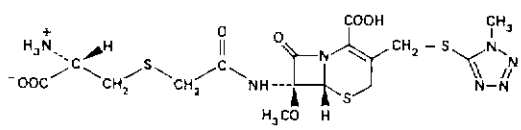


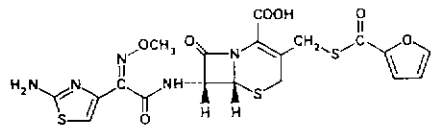
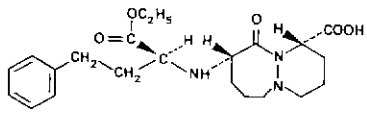
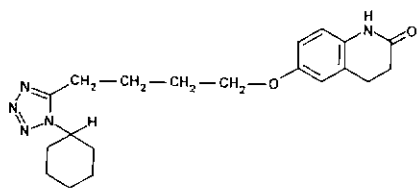
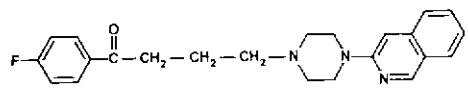
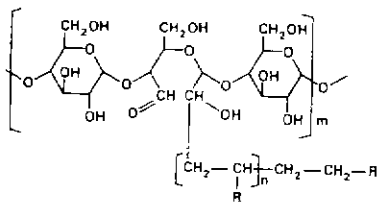
acidum ursulcholicum ursulcholic acid	3α,7β-dihydroxy-5β-cholan-24-oic acid bis(hydrogen sulfate) $C_{24}H_{40}O_{10}S_2$ 88426-32-8

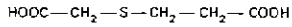
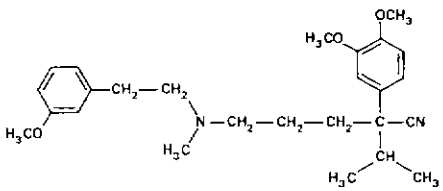
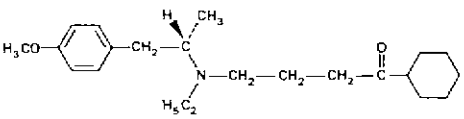
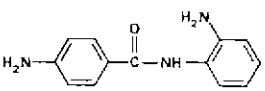
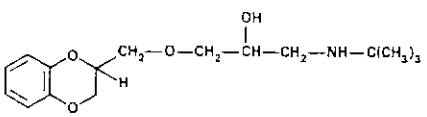


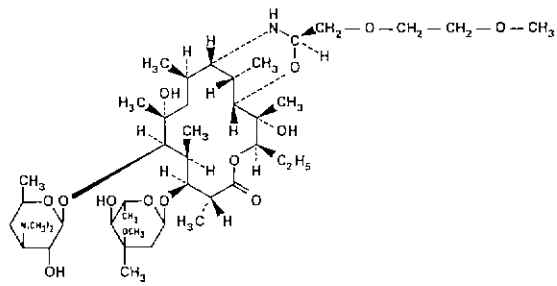
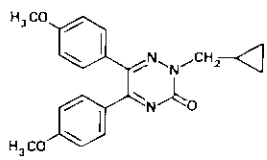
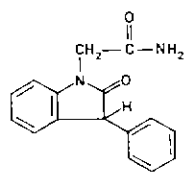
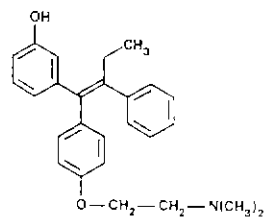
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae Chemical Abstracts Service (CAS) registry number*
alpidemum alpidem	6-chloro-2-(*p*-chlorophenyl)-*N*,*N*-dipropylimidazo[1,2-*a*]pyridine-3-acetamide $C_{21}H_{23}Cl_2N_3O$ 82626-01-5 
alfe) conazolum conazole	*cis*-1-[2-(*p*-chlorophenyl)-3-(2,4-dichlorophenyl)-2,3-epoxypropyl]-1*H*-1,2,4-triazole $C_{17}H_{12}Cl_3N_3O$ 93479-96-0 
amlodipinum amlodipine	3-ethyl 5-methyl (±)-2-[(2-aminoethoxy)methyl]-4-(*o*-chlorophenyl)-1,4-dihydro-6-methyl-3,5-pyridinedicarboxylate $C_{20}H_{25}ClN_2O_5$ 88150-42-9 
axamozidum axamozide	(±)-1-[1-(1,4-benzodioxan-2-ylmethyl)-4-piperidyl]-5-chloro-2-benzimidazolinone $C_{21}H_{22}ClN_3O_3$ 85076-06-8 

Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae Chemical Abstracts Service (CAS) registry number*
azamulinum azamulin	[(5-amino-*s*-triazol-3-yl)thio]acetic acid, 8-ester with (3a*S*,4*R*,5*S*,6*R*,8*R*,9*R*,9a*R*,10*R*)-6-ethyloctahydro-5,8-dihydroxy-4,6,9,10-tetramethyl-3a,9-propano-3a*H*-cyclopentacycloocten-1(4*H*)-one $C_{24}H_{36}N_4O_4S$ 76530-44-4 
benzylpenicillinum benzylpenicillin	(2*S*,5*R*,6*R*)-3,3-dimethyl-7-oxo-6-(2-phenylacetamido)-4-thia-1-azabicyclo[3 2.0]heptane-2-carboxylic acid $C_{16}H_{18}N_2O_4S$ 61-33-6 
bipenamolum bipenamol	*o*-[(*a*-amino-*o*-tolyl)thio]benzyl alcohol $C_{14}H_{15}NOS$ 79467-22-4 
brobactamum brobactam	(2*S*,5*R*,6*R*)-6-bromo-3,3-dimethyl-7-oxo-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid $C_8H_{10}BrNO_3S$ 26631-90-3 
buquiterinum buquiterine	2-(*tert*-butylamino)-6,7-dihydro-9,10-dimethoxy-4*H*-pyrimido[6,1-*a*]isoquinolin-4-one $C_{18}H_{23}N_3O_3$ 76536-74-8 

Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae Chemical Abstracts Service (CAS) registry number*
butinazocinum butinazocine	(±)-3-(3-butynyl)-1,2,3,4,5,6-hexahydro-11,11-dimethyl-2,6-methano-3-benzazocine-6,8-diol $C_{19}H_{23}NO_2$ 93821-75-1 
carbaldratum carbaldrate	sodium (carbonato)dihydroxyaluminate(1-) hydrate CH_2AlNaO_5,nH_2O 41342-54-5 
cefedrolorum cefedrolor	(6*R*,7*R*)-7-[(*R*)-2-amino-2-(3-chloro-4-hydroxyphenyl)acetamido]-3-methyl-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid $C_{16}H_{16}ClN_3O_5S$ 57847-69-5 
cefiximum cefixime	(6*R*,7*R*)-7-[2-(2-amino-4-thiazolyl)glyoxylamido]-8-oxo-3-vinyl-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7²-(*Z*)-[*O*-(carboxymethyl)oxime] $C_{16}H_{15}N_5O_7S_2$ 79350-37-1 
cefminoxum cefminox	(6*R*,7*S*)-7-[2-[[(*S*)-2-amino-2-carboxyethyl]thio]acetamido]-7-methoxy-3-[[(1-methyl-1*H*-tetrazol-5-yl)thio]methyl]-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid $C_{15}H_{21}N_7O_7S_3$ 75481-73-1 

Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae Chemical Abstracts Service (CAS) registry number*
ceftiofurum ceftiofur	(6*R*,7*R*)-7-[2-(2-amino-4-thiazolyl)glyoxylamido]-3-(mercaptomethyl)-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7²-(*Z*)-(*O*-methyloxime), 2-furoate (ester) $C_{19}H_{17}N_5O_7S_3$ 80370-57-6 
cilazaprilum cilazapril	(1*S*,9*S*)-9-[[(*S*)-1-carboxy-3-phenylpropyl]amino]octahydro-10-oxo-6*H*-pyridazino[1,2-*a*][1,2]diazepine-1-carboxylic acid, 9-ethyl ester $C_{22}H_{31}N_3O_5$ 88768-40-5 
cilostazolum cilostazol	6-[4-(1-cyclohexyl-1*H*-tetrazol-5-yl)butoxy]-3,4-dihydrocarbostyril $C_{20}H_{27}N_5O_2$ 73963-72-1 
cinuperonum cinuperone	4′-fluoro-4-[4-(3-isoquinolyl)-1-piperazinyl]butyrophenone $C_{23}H_{24}FN_3O$ 82117-51-9 
crilanomerum crilanomer	starch polymer with acrylonitrile  R = —$CONH_2$ or —COO^-

Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae Chemical Abstracts Service (CAS) registry number*
danosteinum danosteine	3-[(carboxymethyl)thio]propionic acid $C_5H_8O_4S$ 4938-00-5 
devapamilum devapamil	2-(3,4-dimethoxyphenyl)-2-isopropyl-5-[(*m*-methoxyphenethyl)methylamino]valeronitrile $C_{28}H_{36}N_2O_3$ 92302-55-1 
dexsecoverinum dexsecoverine	(+)-(*S*)-1-cyclohexyl-4-[ethyl(*p*-methoxy-α-methylphenethyl)amino]-1-butanone $C_{22}H_{35}NO_2$ 90237-04-0 
dinalinum dinaline	2',4-diaminobenzanilide $C_{13}H_{13}N_3O$ 58338-59-3 
dioxadilolum dioxadilol	(±)-1-(1,4-benzodioxan-2-ylmethoxy)-3-(*tert*-butylamino)-2-propanol $C_{16}H_{25}NO_4$ 80743-08-4 

Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae Chemical Abstracts Service (CAS) registry number*
dirithromycinum dirithromycin	(9S)-9-deoxo-11-deoxy-9,11[imino[2-(2-methoxyethoxy)ethylidene]oxy]erythromycin $C_{42}H_{78}N_2O_{14}$ 62013-04-1 
dizatrifonum dizatrifone	2-(cyclopropylmethyl)-5,6-bis(*p*-methoxyphenyl)-*as*-triazin-3(2*H*)-one $C_{21}H_{21}N_3O_3$ 92257-40-4 
doliracetamum doliracetam	(±)-2-oxo-3-phenyl-1-indolineacetamide $C_{16}H_{14}N_2O_2$ 84901-45-1 
droloxifenum droloxifene	(*E*)-α-[*p*-[2-(dimethylamino)ethoxy]phenyl]-α′-ethyl-3-stilbenol $C_{26}H_{29}NO_2$ 82413-20-5 

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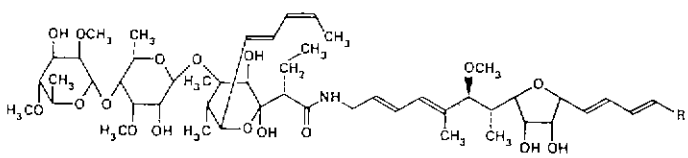
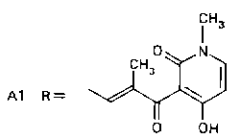
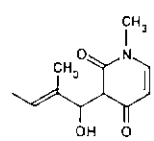
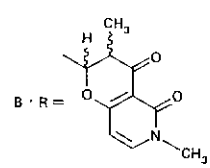
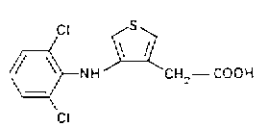
efrotomycinum efrotomycin	An antibiotic produced by *Streptomyces lactamdurans*. Efrotomycin is a complex antibiotic with three components: efrotomycin A_1, efrotomycin A_2 and efrotomycin B empirical molecular formula $C_{59}H_{88}N_2O_{20}$ 56592-32-6 *Component A_1:* (*αS*,2*R*,3*R*,4*R*,6*S*)-4-[[6-deoxy-4-*O*-(6-deoxy-2,4-di-*O*-methyl-α-L-manno-pyranosyl)-3-*O*-methyl-β-D-allopyranosyl]oxy]-*N*-[(2*E*,4*E*,6*S*,7*R*)-7-[(2*S*,3*S*,-4*R*,5*R*)-5-[(1*E*,3*E*,5*E*)-6-(1,2-dihydro-4-hydroxy-1-methyl-2-oxonicotinoyl)-1,3,5-heptatrienyl]tetrahydro-3,4-dihydroxy-2-furyl]-6-methoxy-5-methyl-2,4-octadienyl]-α-ethyltetrahydro-2,3-dihydroxy-5,5-dimethyl-6-[(1*E*,3*Z*)-1,3-pentadienyl]-2*H*-pyran-2-acetamide *Component A_2:* (*αS*,2*R*,3*R*,4*R*,,6*S*)-4-{[6-deoxy-4-*O*-(6-deoxy-2,4-di-*O*-methyl-α-L-mannopyranosyl)-3-*O*-methyl-β-D-allopyranosyl]oxy]-*N*-[(2*E*,4*E*,6*S*,7*R*)-7-[(2*S*,3*S*,4*R*,5*R*)-5-[(1*E*,3*E*,5*E*)-7-[(*E*)-1,4-dihydro-1-methyl-2,4-dioxo-3(2*H*)-pyridylidene]-7-hydroxy-6-methyl-1,3,5-heptatrienyl]tetrahydro-3,4-dihydroxy-2-furyl]-6-methoxy-5-methyl-2,4-octadienyl]-α-ethyltetrahydro-2,3-dihydroxy-5,5-dimethyl-6-[(1*E*,3*Z*)-1,3-pentadienyl]-2*H*-pyran-2-acetamide *Component B:* (*αS*,2*R*,3*R*,4*R*,6*S*)-4-[[6-deoxy-4-*O*-(6-deoxy-2,4-di-*O*-methyl-α-L-mannopyranosyl)-3-*O*-methyl-β-D-allopyranosyl]oxy]-α-ethyltetrahydro-2,3-dihydroxy-*N*-[(2*E*,4*E*,6*S*,7*R*)-6-methoxy-5-methyl-7-[(2*S*,3*S*,4*R*,5*R*)-tetrahydro-3,4-dihydroxy-5-[(1*E*,3*E*)-4-(3,4,5,6-tetrahydro-3,6-dimethyl-4,5-dioxo-2*H*-pyrano[3,2-*c*]-pyridin-2-yl)-1,3-butadienyl]-2-furyl]-2,4-octadienyl]-5,5-dimethyl-6-[(1*E*,3*Z*)-1,3-pentadienyl]-2*H*-pyran-2-acetamide    
eltenacum eltenac	4-(2,6-dichloroanilino)-3-thiopheneacetic acid $C_{12}H_9Cl_2NO_2S$ 72895-88-6 

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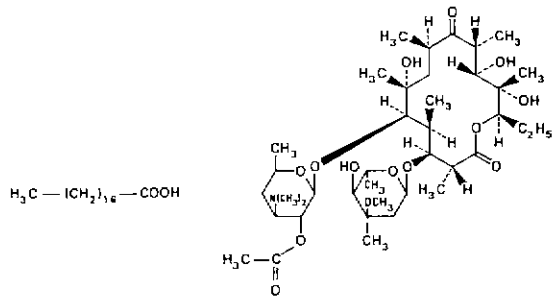
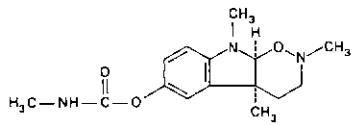
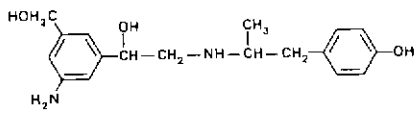
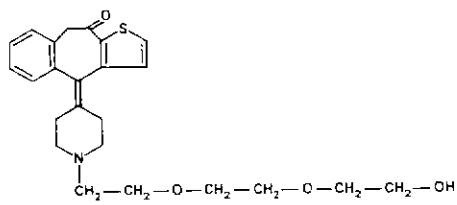
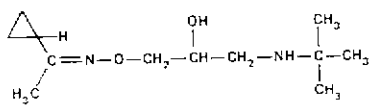
erythromycini acistras erythromycin acistrate	erythromycin 2′-acetate, stearate (salt) $C_{57}H_{105}NO_{16}$ 96128-89-1 
eseridinum eseridine	(4a*S*,9a*S*)-2,3,4,4a,9,9a-hexahydro-2,4a,9-trimethyl-1,2-oxazino[6,5-*b*]indol-6-yl methylcarbamate $C_{15}H_{21}N_3O_3$ 25573-43-7 
etanterolum etanterol	5-amino-α-[[(*p*-hydroxy-α-methylphenethyl)amino]methyl]-*m*-xylene-α,α′-diol $C_{18}H_{24}N_2O_3$ 93047-39-3 
etolotifenum etolotifen	4,9-dihydro-4-[1-[2-[2-(2-hydroxyethoxy)ethoxy]ethyl]-4-piperidylidene]-10*H*-benzo[4,5]cyclohepta[1,2-*b*]thiophen-10-one $C_{24}H_{29}NO_4S$ 82140-22-5 
falintololum falintolol	cyclopropyl methyl ketone, (±)-(*EZ*)-*O*-[3-(*tert*-butylamino)-2-hydroxypropyl]-oxime $C_{12}H_{24}N_2O_2$ 90581-63-8 

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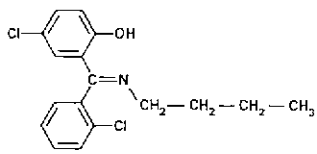
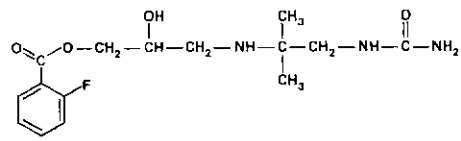
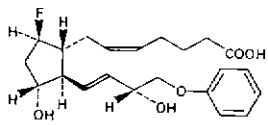
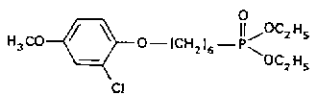
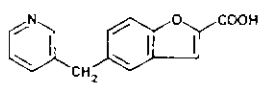
fengabinum fengabine	(*Z*)-2-(*N*-butyl-*o*-chlorobenzimidoyl)-4-chlorophenol $C_{17}H_{17}Cl_2NO$ 80018-06-0 
stololum stolol	*o*-fluorobenzoic acid, 3-ester with (±)-[2-[(2,3-dihydroxypropyl)amino]-2-methylpropyl]urea $C_{15}H_{22}FN_3O_4$ 87721-62-8 
flunoprostum flunoprost	(*Z*)-7-[(1*R*,2*R*,3*R*,5*R*)-5-fluoro-3-hydroxy-2-[(*E*)-(3*R*)-3-hydroxy-4-phenoxy-1-butenyl]cyclopentyl]-5-heptenoic acid $C_{22}H_{29}FO_5$ 86348-98-3 
fosarilatum fosarilate	diethyl [6-(2-chloro-4-methoxyphenoxy)hexyl]phosphonate $C_{17}H_{28}ClO_5P$ 73514-87-1 
furegrelatum furegrelate	5-(3-pyridylmethyl)-2-benzofuranecarboxylic acid $C_{15}H_{11}NO_3$ 85666-24-6 

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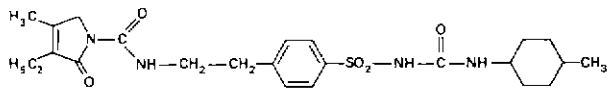
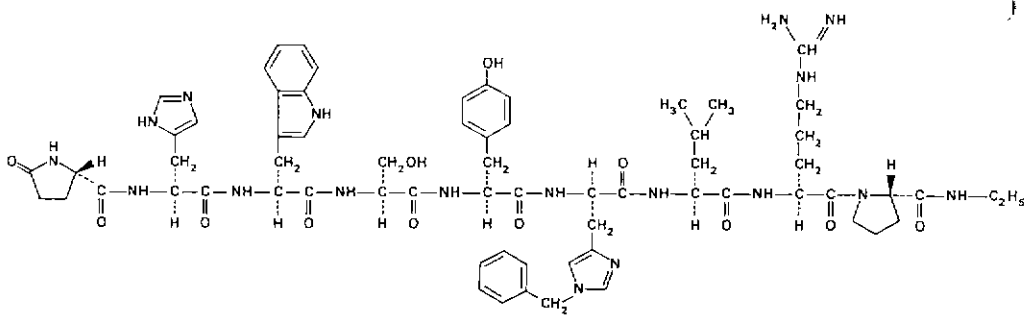
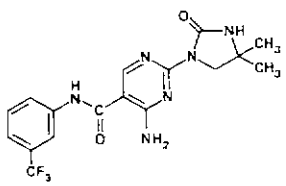
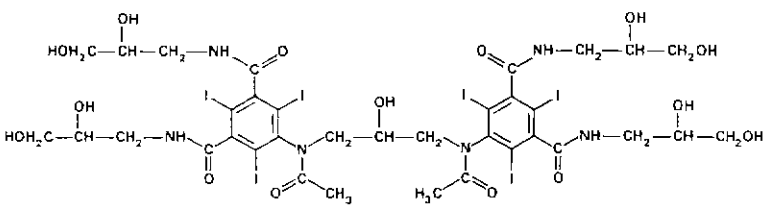
glimepiridum glimepiride	1-[[*p*-[2-(3-ethyl-4-methyl-2-oxo-3-pyrroline-1-carboxamido)ethyl]phenyl]sulfonyl]-3-(4-methylcyclohexyl)urea $C_{24}H_{34}N_4O_5S$ 93479-97-1 
histrelinum histrelin	5-oxo-L-prolyl-L-histidyl-L-tryptophyl-L-seryl-L-tyrosyl-N^{ε}-benzyl-D-histidyl-L-leucyl-L-arginyl-*N*-ethyl-L-prolinamide $C_{66}H_{86}N_{18}O_{12}$ 76712-82-8 
imanixilum imanixil	4-amino-2-(4,4-dimethyl-2-oxo-1-imidazolidinyl)-α,α,α-trifluoro-5-pyrimidinecarboxy-*m*-toluidide $C_{17}H_{17}F_3N_6O_2$ 75689-93-9 
iodixanolum iodixanol	5,5'-[(2-hydroxytrimethylene)bis(acetylimino)]bis[*N*,*N*'-bis(2,3-dihydroxypropyl)-2,4,6-triiodoisophthalamide] $C_{35}H_{44}I_6N_6O_{15}$ 92339-11-2 

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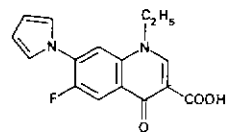
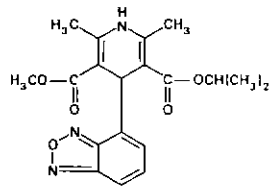
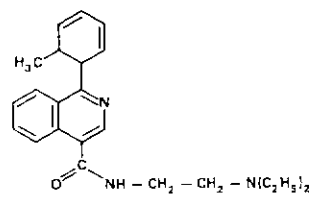
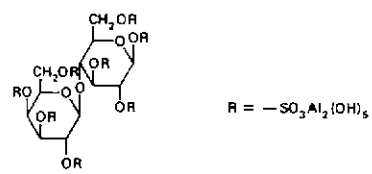
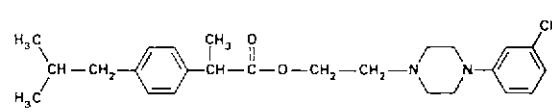
irloxacinum irloxacin	1-ethyl-6-fluoro-1,4-dihydro-4-oxo-7-pyrrol-1-yl-3-quinolinecarboxylic acid $C_{16}H_{13}FN_2O_3$ 91524-15-1 
isrodipinum isrodipine	isopropyl methyl 4-(4-benzofurazanyl)-1,4-dihydro-2,6-dimethyl-3,5-pyridinedicarboxylate $C_{19}H_{21}N_3O_5$ 75695-93-1 
itrocainidum itrocainide	*N*-[2-(diethylamino)ethyl]-1-*o*-tolyl-4-isoquinolinecarboxamide $C_{23}H_{27}N_3O$ 90828-99-2 
lactalfatum lactalfate	lactose octakis(hydrogen sulfate), basic aluminum salt $C_{12}H_{34}Al_{16}O_{75}S_8$ 96427-12-2 
lobuprofenum lobuprofen	2-[4-(*m*-chlorophenyl)-1-piperazinyl]ethyl (±)-*p*-isobutylhydratropate $C_{25}H_{33}ClN_2O_2$ 96128-90-4 

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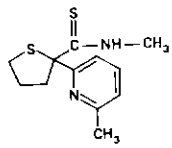
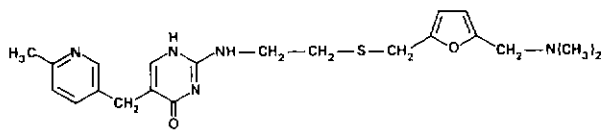
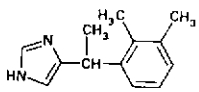
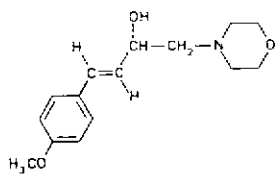
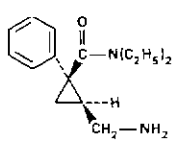
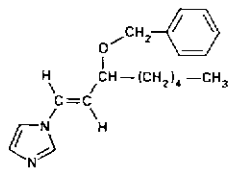
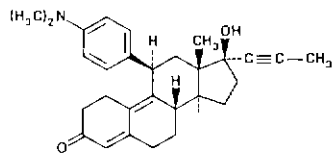
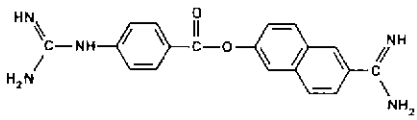
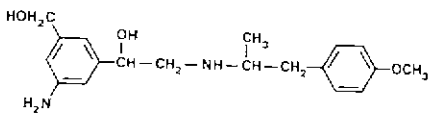
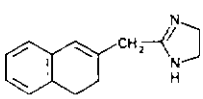
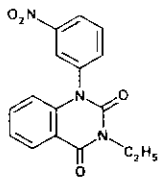
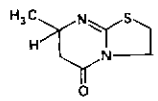
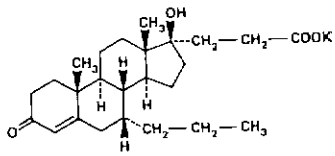
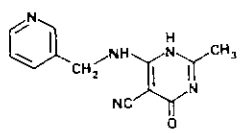
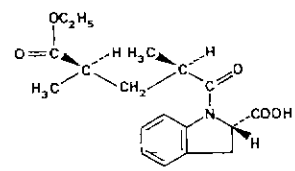
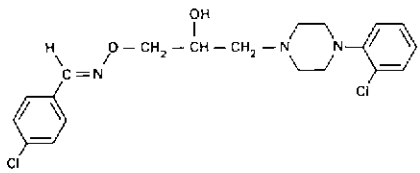
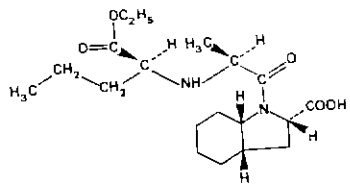
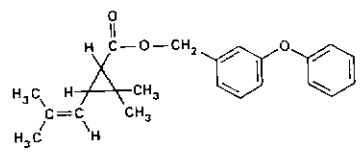
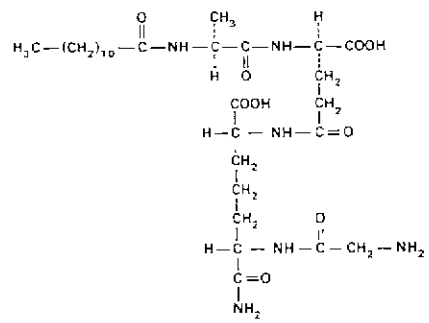
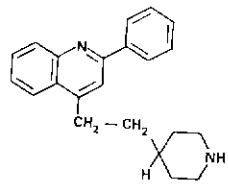
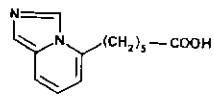
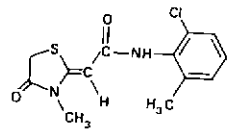
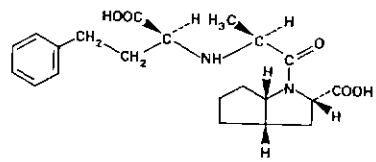
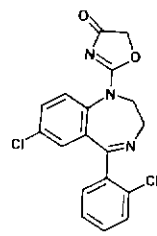
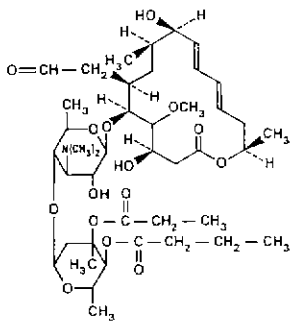
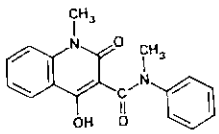
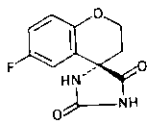
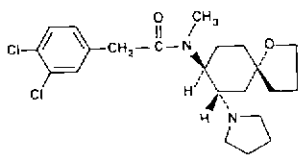
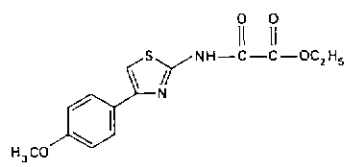
lucartamidum lucartamide	(±)-tetrahydro-*N*-methyl-2-(6-methyl-2-pyridyl)thio-2-thiophenecarboxamide $C_{12}H_{16}N_2S_2$ 76743-10-7 
lupitidinum lupitidine	2-[[2-[[5-[(dimethylamino)methyl]furfuryl]thio]ethyl]amino]-5-[(6-methyl-3-pyridyl)methyl]-4(1*H*)-pyrimidinone $C_{21}H_{27}N_5O_2S$ 83903-06-4 
medetomidinum medetomidine	(±)-4-(α,2,3-trimethylbenzyl)imidazole $C_{13}H_{16}N_2$ 86347-14-0 
metostilenolum metostilenol	(±)-(*E*)-α-(*p*-methoxystyryl)-4-morpholineethanol $C_{15}H_{21}NO_3$ 80304-55-8 
midalcipranum midalcipran	(±)-*cis*-2-(aminomethyl)-*N*,*N*-diethyl-1-phenylcyclopropanecarboxamide $C_{15}H_{21}N_2O$ 92623-85-3 

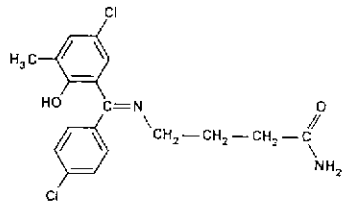
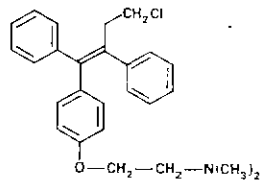
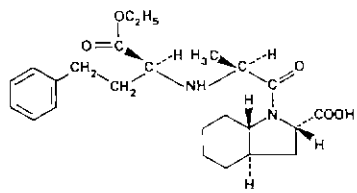
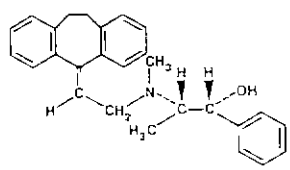
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae Chemical Abstracts Service (CAS) registry number*
midazogrelum midazogrel	(±)-1-[(*E*)-3-(benzyloxy)-1-octenyl]imidazole $C_{18}H_{24}N_2O$ 80614-27-3 
mifepristonum mifepristone	11β-[*p*-(dimethylamino)phenyl]-17β-hydroxy-17-(1-propynyl)estra-4,9-dien-3-one $C_{29}H_{35}NO_2$ 84371-65-3 
nafamostatum nafamostat	6-amidino-2-naphthyl *p*-guanidinobenzoate *or* *p*-guanidinobenzoic acid, ester with 6-hydroxy-2-naphthamidine $C_{19}H_{17}N_5O_2$ 81525-10-2 
naminterolum naminterol	5-amino-α-[[(*p*-methoxy-α-methylphenethyl)amino]methyl]-*m*-xylene-α,α'-diol $C_{19}H_{26}N_2O_3$ 93047-40-6 
napamezolum napamezole	2-[(3,4-dihydro-2-naphthyl)methyl]-2-imidazoline $C_{14}H_{16}N_2$ 91524-14-0 

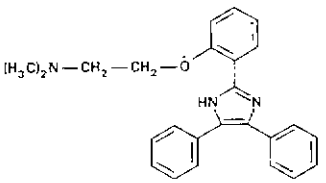
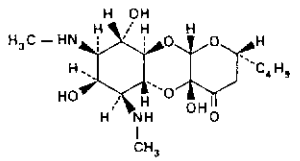
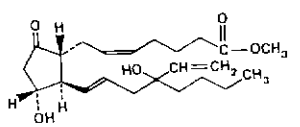
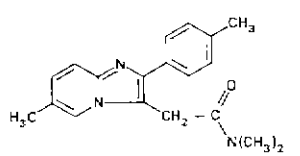
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae Chemical Abstracts Service (CAS) registry number*
nitraquazonum nitraquazone	3-ethyl-1-(*m*-nitrophenyl)-2,4(1*H*,3*H*)-quinazolinedione $C_{16}H_{13}N_3O_4$ 56739-21-0 
olpimedonum olpimedone	(±)-2,3,6,7-tetrahydro-7-methyl-5*H*-thiazolo[3,2-a]pyrimidin-5-one $C_7H_{10}N_2OS$ 39567-20-9 
oxprenoas kalii oxprenoate potassium	potassium 17-hydroxy-3-oxo-7α-propyl-17α-pregn-4-ene-21-carboxylate $C_{25}H_{37}KO_4$ 76676-34-1 
pelrinonum pelrinone	1,4-dihydro-2-methyl-4-oxo-6-[(3-pyridylmethyl)amino]-5-pyrimidinecarbonitrile $C_{12}H_{11}N_5O$ 94386-65-9 
pentoprilum pentopril	ethyl (α*R*,γ*R*,2*S*)-2-carboxy-α,γ-dimethyl-δ-oxo-1-indolinevalerate $C_{18}H_{23}NO_5$ 82924-03-6 

Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae Chemical Abstracts Service (CAS) registry number*
peracloponum peraclopone	*p*-chlorobenzaldehyde (±)-(*E*)-*O*-[3-[4-(*o*-chlorophenyl)-1-piperazinyl]-2-hydroxypropyl]oxime $C_{20}H_{23}Cl_2N_3O_2$ 96164-19-1 
perindoprilum perindopril	(2*S*,3a*S*,7a*S*)-1-[(*S*)-*N*-[(*S*)-1-carboxybutyl]alanyl]hexahydro-2-indolinecarboxylic acid, 1-ethyl ester $C_{19}H_{32}N_2O_5$ 82834-16-0 
phenothrinum phenothrin	*m*-phenoxybenzyl (±)-*cis,trans*-2,2-dimethyl-3-(2-methylpropenyl)cyclopropanecarboxylate $C_{23}H_{26}O_3$ 26002-80-2 
pimelautidum pimelautide	*erythro*-6-carbamoyl-N^2-[*N*-(*N*-lauroyl-L-alanyl)-D-γ-glutamyl]-N^6-glycyl-DL-lysine $C_{29}H_{52}N_6O_9$ 78512-63-7 

Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae Chemical Abstracts Service (CAS) registry number*
pipequalinum pipequaline	2-phenyl-4-[2-(4-piperidyl)ethyl]quinoline $C_{22}H_{24}N_2$ 77472-98-1 
pirmagrelum pirmagrel	imidazo[1,5-*a*]pyridine-5-hexanoic acid $C_{13}H_{16}N_2O_2$ 85691-74-3 
ralitolinum ralitoline	(*Z*)-6′-chloro-3-methyl-4-oxo-$\Delta^{2,\alpha}$-thiazolidineaceto-*o*-toluidide $C_{13}H_{13}ClN_2O_2S$ 93738-40-0 
ramiprilatum ramiprilat	(2*S*,3a*S*,6a*S*)-1-[(*S*)-*N*-[(*S*)-1-carboxy-3-phenylpropyl]alanyl]octahydrocyclopenta[*b*]pyrrole-2-carboxylic acid $C_{21}H_{28}N_2O_5$ 87269-97-4 
reclazepamum reclazepam	2-[7-chloro-5-(*o*-chlorophenyl)-2,3-dihydro-1*H*-1,4-benzodiazepin-1-yl]-2-oxazolin-4-one $C_{18}H_{13}Cl_2N_3O_2$ 76053-16-2 

Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae Chemical Abstracts Service (CAS) registry number*
rokitamycinum rokitamycin	[(4*R*,5*S*,6*S*,7*R*,9*R*,10*R*,11*E*,13*E*,16*R*)-7-(formylmethyl)-4,10-dihydroxy-5-methoxy-9,16-dimethyl-2-oxooxacyclohexadeca-11,13-dien-6-yl]-3,6-dideoxy-4-*O*-(2,6-dideoxy-3-*C*-methyl-α-L-*ribo*-hexopyranosyl)-3-(dimethylamino)-β-D-glucopyranoside 4″-butyrate 3″-propionate $C_{42}H_{68}NO_{15}$ 74014-51-0 
roquinimexum roquinimex	1,2-dihydro-4-hydroxy-*N*,1-dimethyl-2-oxo-3-quinolinecarboxanilide $C_{18}H_{16}N_2O_3$ 84088-42-6 
sorbinilum sorbinil	(*S*)-6-fluorospiro-[chroman-4,4′-imidazolidine]-2′,5′-dione $C_{11}H_9FN_2O_3$ 68367-52-2 
spiradolinum spiradoline	(±)-2-(3,4-dichlorophenyl)-*N*-methyl-*N*-[(5*R**,7*S**,8*S**)-7-(1-pyrrolidinyl)-1-oxaspiro[4,5]dec-8-yl]acetamide $C_{22}H_{30}Cl_2N_2O_2$ 87151-85-7 
tioxamastum tioxamast	ethyl [4-(*p*-methoxyphenyl)-2-thiazolyl]oxamate $C_{14}H_{14}N_2O_4S$ 74531-88-7 

Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae Chemical Abstracts Service (CAS) registry number*
tolgabidum tolgabide	(*E*)-4-[[5-chloro-α-(*p*-chlorophenyl)-3-methylsalicylidene]amino]butyramide $C_{18}H_{18}Cl_2N_2O_2$ 88914-11-6 
toremifenum toremifene	2-[*p*-[(*Z*)-4-chloro-1,2-diphenyl-1-butenyl]phenoxy]-*N*,*N*-dimethylethylamine $C_{26}H_{28}ClNO$ 89778-26-7 
trandolaprilum trandolapril	(2*S*,3a*R*,7a*S*)-1-[(*S*)-*N*-[(*S*)-1-carboxy-3-phenylpropyl]alanyl]hexahydro-2-indolinecarboxylic acid, 1-ethyl ester $C_{24}H_{34}N_2O_5$ 87679-37-6 
trecadrinum trecadrine	(1*R*,2*S*)-α-[1-[[2-(10,11-dihydro-5*H*-dibenzo[*a*,*d*]cyclohepten-5-ylidene)ethyl]-methylamino]ethyl]benzyl alcohol $C_{27}H_{29}NO$ 90845-56-0 

Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae Chemical Abstracts Service (CAS) registry number*
trifenagrelum trifenagrel	2-[*o*-[2-(dimethylamino)ethoxy]phenyl]-4,5-diphenylimidazole $C_{25}H_{25}N_3O$ 84203-09-8 
trospectomycinum trospectomycin	(2*R*,4a*R*,5a*R*,6*S*,7*S*,8*R*,9*S*,9a*R*,10a*S*)-2-butyldecahydro-4a,7,9-trihydroxy-6,8-bis(methylamino)-4*H*-pyrano[2,3-*b*][1,4]benzodioxin-4-one $C_{17}H_{30}N_2O_7$ 88669-04-9 
viprostolum viprostol	(±)-methyl (*Z*)-7-[(1*R*,2*R*,3*R*)-2-[(*E*)-(4*RS*)-4-butyl-4-hydroxy-1,5-hexadienyl]-3-hydroxy-5-oxocyclopentyl]-5-heptenoate $C_{23}H_{38}O_5$ 73647-73-1 
zolpidemum zolpidem	*N*,*N*,6-trimethyl-2-*p*-tolylimidazo[1,2-*a*]pyridine-3-acetamide $C_{19}H_{21}N_3O$ 82626-48-0 

AMENDMENTS TO PREVIOUS LISTS

Vol. 38, N° 2

International Nonproprietary Names (Prop. INN): List 51

p. 14	*delete*	*insert*
	taltibridum taltibride	metibridum metibride

Vol. 38, N° 4

International Nonproprietary Names (Prop. INN): List 52

p. 23 interferonum alfa
interferon alfa

replace the sentence preceding the table and the table itself by the following:

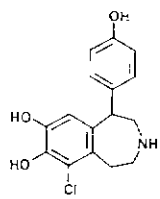
In the case of interferon alfa-2 it is necessary to qualify the number by a letter depending on the amino-acid group occupying positions 23 and 34 respectively in the peptide chain:

	Position	
	23	34
alfa-2a	Lys	His
alfa-2b	Arg	His
alfa-2c	Arg	Arg

p. 23	*delete*	*insert*
	metamizolum metamizole	metamizolum natricum metamizole sodium

p. 24 fenoldopamum
fenoldopam

complete chemical structure with an –OH group as follows:



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;

(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.

* Text adopted by the Executive Board of WHO in resolution EB15.R7 (*Off. Rec. Wld Hlth 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.

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.

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
cort	cort	corticosteroids, except those of the prednisolone group
-dipinum	-dipine	peripheral vasodilators of the nifedipine group
-fibratum	-fibrate	substances of the clofibrate group
-forminum	-formin	hypoglycemics of the phenformin 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 of the propranolol group
-oxacinum	-oxacin	antibacterial agents of the nalidix acid group
-pridum	-pride	sulpiride derivatives
-profenum	-profen	anti-inflammatory substances of the ibuprofen group
prost	prost	prostaglandins
-relinum	-relin	hypophyseal hormone release-stimulating peptides
-terolum	-terol	bronchodilators, phenethylamine derivates
-tidinum	-tidine	H_2-receptor antagonists
-trexatum	-trexate	folic acid antagonists
-verinum	-verine	spasmolytics with a papaverine-like action
vin-	vin-	vinca type alkaloids
-vin-	-vin-	

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

Annex 2
NONPROPRIETARY NAMES FOR PHARMACEUTICAL SUBSTANCES: TWENTIETH REPORT OF THE WHO EXPERT COMMITTEE

In its twentieth report[1] 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 recent 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. Also reported is the intention to change the practice with regard to the nomenclature of individual members of polymeric series.

Other sections of the report concern instructions to be followed by bodies making application for international nonproprietary names, the availability of computer-printed cumulative lists of international nonproprietary names, information supplied by WHO Member States concerning their official use of national or international names for pharmaceutical products, and proposals relative to the withdrawal of international nonproprietary names allocated to substances that are no longer in use.

The official texts relating to the procedures for selecting, and general guidance for devising, international nonproprietary names are reproduced in two annexes to the report. Other annexes give examples of international nonproprietary names that incorporate selected stems, the most frequently used initial groups of letters in international nonproprietary names, a historical review of the programme of selecting international nonproprietary names, some useful literature references, and a model of the form to be used in all applications for international nonproprietary names.

[1] WHO Technical Report Series, No. 581, 1975 (*Nonproprietary Names for Pharmaceutical Substances*. Twentieth Report of the WHO Expert Committee), ISBN 92 4 120581 4 Price: Sw. fr. 6 –