

International Nonproprietary Names for Pharmaceutical Substances

In accordance with paragraph 7 of the Procedure for the Selection of Recommended International Nonproprietary Names for Pharmaceutical Sub-

stances,¹ notice is hereby given that the following are selected as recommended international nonproprietary names.

The inclusion of a name in the

lists of recommended international nonproprietary names does not imply any recommendation for the use of the substance in medicine or pharmacy.

Recommended International Nonproprietary Names (Rec. INN): List 26²

Recommended International Nonproprietary Name (Latin, English)	Chemical Name or Description and Molecular Formulae
acidum azelaicum azelaic acid	azelaic acid $C_9H_{16}O_4$
acitematum acitemate	(±)- <i>cis</i> -3-carboxy-6,7,8,9-tetrahydro-6-methyl-4-oxo-4 <i>H</i> -pyrido[1,2- <i>a</i>]- pyrimidine-9-acetic acid, 3-ethyl ester $C_{14}H_{18}N_2O_5$
altapizonum altapizone	4-phenyl-4'-(1,4,5,6-tetrahydro-6-oxo-3-pyridazinyl)-1-piperidinepropionanilide $C_{24}H_{28}N_4O_2$
amebucortum amebucort	11β,17,21-trihydroxy-6α-methylpregn-4-ene-3,20-dione 21-acetate 17-butyrate $C_{28}H_{40}O_7$
amlexanoxum amlexanox	2-amino-7-isopropyl-5-oxo-5 <i>H</i> -[1]benzopyrano[2,3- <i>b</i>]pyridine-3-carboxylic acid $C_{18}H_{14}N_2O_4$
amorolfinum amorolfine	(±)- <i>cis</i> -2,6-dimethyl-4-[2-methyl-3-(<i>p</i> - <i>tert</i> -pentylphenyl)propyl]morpholine $C_{21}H_{25}NO$
amylmetacresolum amylmetacresol	6-pentyl- <i>m</i> -cresol $C_{12}H_{18}O$
anpirtolinum anpirtoline	4-[(6-chloro-2-pyridyl)thio]piperidine $C_{10}H_{13}ClN_2S$

¹ *Off. Rev. Wld Hlth Org.*, 1955, 60, 3 (Resolution EB15 R7); 1969, 1973, 10 (Resolution EB43 R9).

² Other lists of recommended international nonproprietary names can be found in *Chron. Wld Hlth Org.*, 1955,

9, 185; *WHO Chronicle*, 1959, 13, 106, 463; 1962, 16, 101; 1965, 19, 165, 206, 249; 1966, 20, 421; 1967, 21, 538, 1968, 22, 463; 1969, 23, 490; 1970, 24, 526, 1971, 25, 476; 1972, 26, 476; 1973, 27, 452, Supplements to *WHO Chronicle*,

1974, Vol. 28, No. 10; 1975, Vol. 29, No. 10, 1976, Vol. 30, No. 10; 1977, Vol. 31, No. 10; 1978, Vol. 32, No. 10; 1979, Vol. 33, No. 10; 1980, Vol. 34, No. 10; Vol. 35, No. 5; Vol. 36, No. 6; Vol. 37, No. 6, Vol. 38, No. 6, Vol. 39, No. 5.

*Recommended International
Nonproprietary Name (Latin, English)*

Chemical Name or Description and Molecular Formulae

atamestanum atamestane	1-methylandrosta-1,4-diene-3,17-dione $C_{26}H_{28}O_2$
befiperidum befiperide	<i>N</i> -[2-[4-(7-benzofuranyl)-1-piperazinyl]ethyl]- <i>p</i> -isopropyl- <i>N</i> -methylbenzamide $C_{25}H_{31}N_3O_2$
bemitradinum bemitradine	5-amino-8-(2-ethoxyethyl)-7-phenyl- <i>s</i> -triazolo[1,5- <i>c</i>]pyrimidine $C_{15}H_{17}N_5O$
brofarominum brofaromine	4-(7-bromo-5-methoxy-2-benzofuranyl)piperidine $C_{14}H_{16}BrNO_2$
brofamfetaminum brofamfetamine	(±)-4-bromo-2,5-dimethoxy- α -methylphenethylamine $C_{11}H_{16}BrNO_2$
bromfenacum bromfenac	[2-amino-3-(<i>p</i> -bromobenzoyl)phenyl]acetic acid $C_{15}H_{12}BrNO_3$
bropiriminum bropirimine	5-bromo-2,3-dihydro-2-imino-6-phenyl-4(1 <i>H</i>)-pyrimidinone $C_{10}H_8BrN_3O$
bucillatinum bucillamine	<i>N</i> -(2-mercapto-2-methylpropionyl)-L-cysteine $C_7H_{13}NO_3S_2$
butaprostum butaprost	methyl (1 <i>R</i> ,2 <i>R</i> ,3 <i>R</i>)-3-hydroxy-2-[(1 <i>E</i> ,4 <i>R</i>)-4-hydroxy-4-(1-propylcyclobutyl)-1-butenyl]-5-oxocyclopentaneheptanoate $C_{24}H_{40}O_5$
cabergolinum cabergoline	1-[(6-allylergolin-8 β -yl)carbonyl]-1-[3-(dimethylamino)propyl]-3-ethylurea $C_{26}H_{37}N_5O_2$
carvedilolum carvedilol	(±)-1-(carbazon-4-yloxy)-3-[[2-(<i>o</i> -methoxyphenoxy)ethyl]amino]-2-propanol $C_{24}H_{26}N_2O_4$
cefteramum cefteram	(+)-(6 <i>R</i> ,7 <i>R</i>)-7-[2-(2-amino-4-thiazolyl)glyoxylamido]-3-[(5-methyl-2 <i>H</i> -tetrazol-2-yl)methyl]-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7 ² -(<i>Z</i>)-(O-methylloxime) $C_{18}H_{17}N_5O_5S_2$
cefuzonamum cefuzonam	(-)-(6 <i>R</i> ,7 <i>R</i>)-7-[2-(2-amino-4-thiazolyl)glyoxylamido]-8-oxo-3-[(1,2,3-thiadiazol-5-ylthio)methyl]-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7 ² -(<i>Z</i>)-(O-methylloxime) $C_{16}H_{15}N_7O_5S_4$
cicaprostum cicaprost	[2-[(2 <i>E</i> ,3 <i>aS</i> ,4 <i>S</i> ,5 <i>R</i> ,6 <i>aS</i>)-hexahydro-5-hydroxy-4-[(3 <i>S</i> ,4 <i>S</i>)-3-hydroxy-4-methyl-1,6-nonadiynyl]-2(1 <i>H</i>)-pentalenyldiene]ethoxy]acetic acid $C_{22}H_{30}O_5$
cicletaninum cicletanine	(±)-3-(<i>p</i> -chlorophenyl)-1,3-dihydro-6-methylfuro[3,4- <i>c</i>]pyridin-7-ol $C_{14}H_{12}ClNO_2$
cilazaprilatum cilazaprilat	(1 <i>S</i> ,9 <i>S</i>)-9-[[[(<i>S</i>)-1-carboxy-3-phenylpropyl]amino]octahydro-10-oxo-6 <i>H</i> -pyridazino[1,2- <i>a</i>][1,2]diazepine-1-carboxylic acid $C_{26}H_{27}N_5O_5$

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cimaterolum cimaterol	(±)-5-[1-hydroxy-2-(isopropylamino)ethyl]anthranilonitrile C ₁₂ H ₁₇ N ₃ O
cinoxopazidum cinoxopazide	1-[(E)-3,4-(methylenedioxy)cinnamoyl]-4-[(1-pyrrolidinylcarbonyl)methyl]- piperazine C ₂₀ H ₂₅ N ₃ O ₄
cistinexinum cistinexine	dibenzyl [dithiobis[(R)-1-[[4,6-dibromo-α-(cyclohexylmethylamino)-o- tolyl]carbamoyl]ethylene]]dicarbamate C ₂₀ H ₂₀ Br ₄ N ₆ O ₆ S ₂
citatepinum citatepine	2,3,4,5-tetrahydro-3-methyl-1H-dibenzo[2,3:6,7]thiepino[4,5-d]azepine-7- carbonitrile C ₂₀ H ₁₈ N ₂ S
clomifenoxidum clomifenoxide	2-[p-(2-chloro-1,2-diphenylvinyl)phenoxy]triethylamine N-oxide C ₂₆ H ₂₈ ClNO ₂
croconazolum croconazole	1-[1-[o-[(m-chlorobenzyl)oxy]phenyl]vinyl]imidazole C ₁₄ H ₁₃ ClN ₂ O
dametralastum dametralast	2,4-diamino-7-methylpyrazolo[1,5-a]-s-triazine C ₆ H ₆ N ₄
dazepinitum dazepinil	(±)-4,5-dihydro-2,3-dimethyl-4-phenyl-3H-1,3-benzodiazepine C ₁₇ H ₁₈ N ₂
dazoquinastum dazoquinast	imidazo[1,2-a]quinoxaline-2-carboxylic acid C ₁₁ H ₇ N ₃ O ₂
delaprilum delapril	ethyl (S)-2-[[1-(S)-{(carboxymethyl)-2-indanylcabamoyl}ethyl]amino]-4- phenylbutyrate C ₂₆ H ₃₂ N ₂ O ₅
desciclovirum desciclovir	2-[(2-amino-9H-purin-9-yl)methoxy]ethanol C ₈ H ₁₁ N ₅ O ₂
dexfenfluraminum dexfenfluramine	(+)-(S)-N-ethyl-α-methyl-m-(trifluoromethyl)phenethylamine C ₁₂ H ₁₆ F ₃ N
disiquonium chloridum disiquonium chloride	didecylmethyl[3-(trimethoxysilyl)propyl]ammonium chloride C ₂₇ H ₆₀ ClNO ₃ Si
disoxarilum disoxaril	3-methyl-5-[7-(p-2-oxazolin-2-ylphenoxy)heptyl]isoxazole C ₂₀ H ₂₈ N ₂ O ₃
domipizonum domipizone	(±)-6-(3,4-dimethoxyphenyl)-4,5-dihydro-5-(hydroxymethyl)-3(2H)- pyridazinone C ₁₃ H ₁₆ N ₂ O ₄
dosergosidum dosergoside	N-[(1S,2R,3E)-2-hydroxy-1-(hydroxymethyl)-3-heptadecenyl]-6-methylergoline- 8β-carboxamide C ₃₄ H ₅₀ N ₃ O ₃
draquinololum draquinolol	3-[p-[3-(tert-butylamino)-2-hydroxypropoxy]phenyl]-7-methoxy-2-methyliso- carbostyryl C ₂₄ H ₃₀ N ₂ O ₄

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duoperonum duoperone	<i>p</i> -fluorophenyl 1-[3-[2-(trifluoromethyl)phenothiazin-10-yl]propyl]-4-piperidyl ketone $C_{28}H_{26}F_4N_2OS$
eclanaminum eclanamine	($\pm$)- <i>trans</i> -3',4'-dichloro- <i>N</i> -[2-(dimethylamino)cyclopentyl]propionanilide $C_{16}H_{22}Cl_2N_2O$
eclazolastum eclazolast	2-ethoxyethyl 5-chloro-2-benzoxazolecarboxylate $C_{12}H_{12}ClNO_4$
emiglitatum emiglitate	ethyl <i>p</i> -[2-[(2 <i>R</i> ,3 <i>R</i> ,4 <i>R</i> ,5 <i>S</i>)-3,4,5-trihydroxy-2-(hydroxymethyl)piperidino]ethoxy]benzoate $C_{17}H_{25}NO_7$
enefexinum enefexine	4-(<i>p</i> -ethylphenyl)piperidine $C_{13}H_{15}N$
enoxacinum enoxacin	1-ethyl-6-fluoro-1,4-dihydro-4-oxo-7-(1-piperazinyl)-1,8-naphthyridine-3-carboxylic acid $C_{15}H_{17}FN_4O_3$
epalrestatum epalrestat	5-[(<i>E,E</i>)- β -methylcinnamylidene]-4-oxo-2-thioxo-3-thiazolidineacetic acid $C_{15}H_{13}NO_3S_2$
erizepinum erizepine	1,2,3,4,5,10-hexahydro-3,10-dimethylazepino[4,5- <i>d</i>]dibenz[<i>b,f</i>]azepine $C_{26}H_{22}N_2$
esupronum esuprone	7-hydroxy-3,4-dimethylcoumarin ethanesulfonate $C_{13}H_{14}O_5S$
felbamatum felbamate	2-phenyl-1,3-propanediol dicarbamate $C_{11}H_{14}N_2O_4$
felbinacum felbinac	4-biphenylacetic acid $C_{14}H_{12}O_2$
fenfluthrinum fenfluthrin	2,3,4,5,6-pentafluorobenzyl (1 <i>R</i> ,3 <i>S</i>)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate $C_{15}H_1Cl_2F_5O_2$
flesinoxanum flesinoxan	(+)- <i>p</i> -fluoro- <i>N</i> -[2-[4-[2-(hydroxymethyl)-1,4-benzodioxan-5-yl]-1-piperazinyl]ethyl]benzamide $C_{22}H_{26}FN_3O_4$
flomoxefum flomoxef	(-)-(6 <i>R</i> ,7 <i>R</i>)-7-[2-[(difluoromethyl)thio]acetamido]-3-[[[1-(2-hydroxyethyl)-1 <i>H</i> -tetrazol-5-yl]thio]methyl]-7-methoxy-8-oxo-5-oxa-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid $C_{15}H_{18}F_2N_4O_7S_2$
florfenicolum florfenicol	2,2-dichloro- <i>N</i> -[(α <i>S</i> , β <i>R</i>)- α -(fluoromethyl)- β -hydroxy- <i>p</i> -(methylsulfonyl)-phenethyl]acetamide $C_{12}H_{14}Cl_2FNO_4S$
fluconazolum fluconazole	2,4-difluoro- α , α -bis(1 <i>H</i> -1,2,4-triazol-1-yl)methylbenzyl alcohol $C_{13}H_{12}F_2N_6O$

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flumazenilum flumazenil	ethyl 8-fluoro-5,6-dihydro-5-methyl-6-oxo-4 <i>H</i> -imidazo[1,5- <i>a</i>][1,4]benzodiazepine-3-carboxylate C ₁₅ H ₁₄ FN ₃ O ₃
fomidacillinum fomidacillin	(2 <i>S</i> ,5 <i>R</i> ,6 <i>R</i>)-6-[(<i>R</i>)-2-(3,4-dihydroxyphenyl)-2-(4-ethyl-2,3-dioxo-1-piperazine-carboxamido)acetamido]-6-formamido-3,3-dimethyl-7-oxo-4-thia-1-azabicyclo-[3.2.0]heptane-2-carboxylic acid C ₂₄ H ₂₈ N ₆ O ₁₀ S
forfenimexum forfenimex	(+)-(S)-2-(<i>a</i> ,3-dihydroxy- <i>p</i> -tolyl)glycine C ₉ H ₁₁ NO ₄
fostriecinum fostriecin	5,6-dihydro-6-[3,4,6,13-tetrahydroxy-3-methyl-1,7,9,11-tridecatetraenyl]-2 <i>H</i> -pyran-2-one 4-(dihydrogen phosphate) C ₁₅ H ₂₇ O ₉ P
froxiprostum froxiprost	methyl (2 <i>E</i> ,5 <i>Z</i>)-7-[(1 <i>R</i> ,2 <i>R</i> ,3 <i>R</i> ,5 <i>S</i>)-3,5-dihydroxy-2-[(<i>E</i>)-(3 <i>R</i>)-3-hydroxy-4-[(<i>a</i> , <i>a</i> , <i>a</i> -trifluoro- <i>m</i> -tolyl)oxy]-1-butenyl]cyclopentyl]-2,5-heptadienoate C ₂₄ H ₂₉ F ₃ O ₆
gloximonamum gloximonam	[(2 <i>S</i> ,3 <i>S</i>)-3-[(2-amino-4-thiazolyl)glyoxylamido]-2-methyl-4-oxo-1-azetidinyloxy]acetic acid, ester with <i>tert</i> -butyl glycolate, 3 ² -(<i>Z</i>)-(O-methyloxime) C ₁₈ H ₂₅ N ₅ O ₄ S
hydrocortisoni aceponas hydrocortisone aceponate	11 β ,17,21-trihydroxypregn-4-ene-3,20-dione 21-acetate 17-propionate C ₂₈ H ₃₆ O ₇
idaverinum idaverine	(+)-1-[4-[ethyl(<i>p</i> -methoxy- α -methylphenethyl)amino]butyryl]- <i>N,N</i> -dimethylisonipecotamide C ₂₄ H ₃₉ N ₃ O ₃
idralfidinum idralfidine	4,2-cresotaldehyde 2-imidazolin-2-ylhydrazone C ₁₁ H ₁₄ N ₄ O
ifoxetinum ifoxetine	($\pm$)- <i>cis</i> -4-(2,3-xylyloxy)-3-piperidinol C ₁₃ H ₁₉ NO ₂
imazodanum imazodan	4,5-dihydro-6-(<i>p</i> -imidazol-1-ylphenyl)-3(2 <i>H</i>)-pyridazinone C ₁₃ H ₁₂ N ₄ O
indatralinum indatraline	($\pm$)- <i>trans</i> -3-(3,4-dichlorophenyl)- <i>N</i> -methyl-1-indanamine C ₁₆ H ₁₅ Cl ₂ N
inocoteronom inocoterone	17 β -hydroxy-2,5- <i>seco</i> - <i>A</i> -dinorestr-9-en-5-one C ₁₈ H ₂₄ O ₂
iomeprolum iomeprol	<i>N,N'</i> -bis(2,3-dihydroxypropyl)-2,4,6-triiodo-5-(<i>N</i> -methylglycolamido)-isophthalamide C ₁₇ H ₂₂ I ₃ N ₃ O ₈
ipsapironum ipsapirone	2-[4-[4-(2-pyrimidinyl)-1-piperazinyl]butyl]-1,2-benzisothiazolin-3-one 1,1-dioxide C ₁₉ H ₂₃ N ₅ O ₃ S

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irindalonum irindalone	(+)-(1 <i>R</i> ,3 <i>S</i>)-1-[2-[4-[3-(<i>p</i> -fluorophenyl)-1-indanyl]-1-piperazinyl]ethyl]-2-imidazolidinone C ₂₄ H ₂₉ FN ₄ O
irolapridum irolapride	(±)-5-butyryl- <i>N</i> -[(1-ethyl-2-pyrrolidinyl)methyl]- <i>o</i> -anisamide C ₁₉ H ₂₈ N ₂ O ₃
isepamicinum isepamicin	O-6-amino-6-deoxy- α -D-glucopyranosyl-(1→4)-O-[3-deoxy-4-C-methyl-3-(methylamino)- β -L-arabinopyranosyl-(1→6)]-2-deoxy- <i>N</i> '-[(<i>S</i>)-isoserine]- <i>o</i> -streptamine C ₂₂ H ₄₃ N ₅ O ₁₂
isomazolum isomazole	2-[2-methoxy-4-(methylsulfinyl)phenyl]-1 <i>H</i> -imidazo[4,5- <i>c</i>]pyridine C ₁₄ H ₁₃ N ₃ O ₂ S
isradipinum isradipine	isopropyl methyl 4-(4-benzofurazanyl)-1,4-dihydro-2,6-dimethyl-3,5-pyridine-dicarboxylate C ₁₉ H ₂₁ N ₃ O ₃
lilopristonum lilopristone	11 β -[<i>p</i> -(dimethylamino)phenyl]-17 β -hydroxy-17-[(<i>Z</i>)-3-hydroxypropenyl]estr-4,9-dien-3-one C ₂₈ H ₃₇ NO ₃
lobuprofenum lobuprofen	2-[4-(<i>m</i> -chlorophenyl)-1-piperazinyl]ethyl (±)- <i>p</i> -isobutylhydropyruvate C ₂₅ H ₃₃ ClN ₂ O ₂
lodazecarum lodazecar	1-[1,1-bis(hydroxymethyl)ethyl]-3-[(<i>S</i>)-6-bromo-5-(<i>o</i> -chlorophenyl)-2,3-dihydro-1,3-dimethyl-2-oxo-1 <i>H</i> -1,4-benzodiazepin-7-yl]urea C ₂₂ H ₂₄ BrClN ₄ O ₄
lonapalenum lonapalene	6-chloro-2,3-dimethoxy-1,4-naphthalenediol diacetate C ₁₆ H ₁₅ ClO ₄
loratadinum loratadine	ethyl 4-(8-chloro-5,6-dihydro-11 <i>H</i> -benzo[5,6]cyclohepta[1,2- <i>b</i>]pyridin-11-ylidene)-1-piperidinecarboxylate C ₂₂ H ₂₃ ClN ₂ O ₂
maroxepinum maroxepin	2,3,4,5-tetrahydro-3-methyl-1 <i>H</i> -dibenz[2,3,6,7]oxepino[4,5- <i>d</i>]azepine C ₁₉ H ₁₉ NO
medetomidinum medetomidine	(±)-4-(α ,2,3-trimethylbenzyl)imidazole C ₁₃ H ₁₆ N ₂
medorinonum medorinone	5-methyl-1,6-naphthyridin-2(1 <i>H</i>)-one C ₉ H ₈ N ₂ O
meloxicamum meloxicam	4-hydroxy-2-methyl- <i>N</i> -(5-methyl-2-thiazolyl)-2 <i>H</i> -1,2-benzothiazine-3-carboxamide 1,1-dioxide C ₁₄ H ₁₃ N ₃ O ₃ S ₂
mergocriptinum mergocriptine	2-methyl- α -ergocryptine C ₃₃ H ₄₃ N ₅ O ₅
minocromilum minocromil	6-(methylamino)-4-oxo-10-propyl-4 <i>H</i> -pyrano[3,2- <i>g</i>]quinoline-2,8-dicarboxylic acid C ₁₈ H ₁₆ N ₂ O ₆
mitoquidonum mitoquidone	5,14-dihydrobenz[5,6]isoindolo[2,1- <i>b</i>]isoquinoline-8,13-dione C ₂₀ H ₁₃ NO ₂

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molracetamum molracetam	4-[(4- <i>p</i> -anisoyl-1-piperazinyl)acetyl]morpholine $C_{18}H_{25}N_3O_4$
nafenodonum nafenodone	($\pm$)-2-[2-(dimethylamino)ethyl]-3,4-dihydro-2-phenyl-1(2 <i>H</i>)-naphthalenone $C_{20}H_{23}NO$
neflumozidum neflumozide	1-[1-[3-(6-fluoro-1,2-benzisoxazol-3-yl)propyl]-4-piperidyl]-2-benzimid- azolinone $C_{22}H_{23}FN_4O_2$
netobiminum netobimin	methyl [<i>N</i> -(2-nitro-5-(propylthio)phenyl)- <i>N'</i> -(2-sulfoethyl)amidino]carbamate $C_{14}H_{20}N_4O_7S_2$
nictiazemum nictiazem	(+)- <i>cis</i> -5-[2-(dimethylamino)ethyl]-2,3-dihydro-3-hydroxy-2-(<i>p</i> -methoxy- phenyl)-1,5-benzothiazepin-4(5 <i>H</i>)-one nicotinate (ester) $C_{28}H_{27}N_3O_4S$
niperotidinum nerotidine	<i>N</i> -[2-{[5-{[(dimethylamino)methyl]furfuryl}thio]ethyl}-2-nitro- <i>N'</i> -piperonyl-1,1- ethenediamine $C_{20}H_{26}N_4O_5S$
obidoximi chloridum obidoxime chloride	1,1'-(oxydimethylen)bis(4-formylpyridinium chloride) dioxime $C_{14}H_{16}Cl_2N_4O_3$
oximonamum oximonam	[[2 <i>S</i> ,3 <i>S</i>]-3-[(2-amino-4-thiazolyl)glyoxylamido]-2-methyl-4-oxo-1- azetidinyl]oxy]acetic acid, 3 ² -(<i>Z</i>)-(O-methyloxime) $C_{12}H_{15}N_5O_6S$
oxindanacum oxindanac	($\pm$)-5-benzoyl-6-hydroxy-1-indancarboxylic acid $C_{17}H_{14}O_4$
ozagrelum ozagrel	(<i>E</i>)- <i>p</i> -(imidazol-1-ylmethyl)cinnamic acid $C_{13}H_{12}N_2O_2$
paldimycinum paldimycin	Antibiotic produced by <i>Streptomyces</i> organism. Paldimycin consists of two compounds: paldimycin A and paldimycin B, in approximately a 1 : 1 ratio paldimycin A: R = CH ₃ 2-amino-5-[3- <i>O</i> -[2,6-dideoxy-4- <i>C</i> -[(1 <i>S</i>)-1-hydroxyethyl]-3- <i>O</i> -methyl- α -L-lyxo- hexopyranosyl]- β -D-allopyranosyl]-5-hydroxy-3,6-dioxo-1-cyclohexene-1- carboxylic acid, 4'-[3-[(2 <i>R</i>)-2-acetamido-2-carboxyethyl]thio]-2-[(dithio- carboxy)amino]butyrate], 6'-acetate, 4''-C-[(2 <i>S</i>)-2-methylbutyrate], <i>S</i> -ester with <i>N</i> -acetyl-L-cysteine. $C_{44}H_{64}N_4O_{23}S_3$ paldimycin B: R = H 2-amino-5-[3- <i>O</i> -[2,6-dideoxy-4- <i>C</i> -[(1 <i>S</i>)-1-hydroxyethyl]-3- <i>O</i> -methyl- α -L-lyxo- hexopyranosyl]- β -D-allopyranosyl]-5-hydroxy-3,6-dioxo-1-cyclohexene-1- carboxylic acid, 4'-[3-[(2 <i>R</i>)-2-acetamido-2-carboxyethyl]thio]-2-[(dithio- carboxy)amino]butyrate]. 6'-acetate, 4''-C-isobutyrate, <i>S</i> -ester with <i>N</i> -acetyl- L-cysteine $C_{43}H_{62}N_4O_{23}S_3$
pirarubicinum pirarubicin	(8 <i>S</i> , 10 <i>S</i>)-10-[3-amino-2,3,6-trideoxy-4- <i>O</i> -(tetrahydro-2 <i>H</i> -pyran-2-yl)- α -L-lyxo- hexopyranosyl]oxy]-8-glycoloyl-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1- methoxy-5,12-naphthacenedione $C_{32}H_{37}NO_{12}$

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piritreximum piritrexim	2,4-diamino-6-(2,5-dimethoxybenzyl)-5-methylpyrido[2,3- <i>d</i>]pyrimidine C ₁₇ H ₁₅ N ₅ O ₂
policresulenum policresulen	α -(4-hydroxy-2-methyl-5-sulfobenzyl)- ω -(4-hydroxy-5-sulfo- <i>o</i> -tolyl)poly- [(4-hydroxy-2-methyl-5-sulfo- <i>m</i> -phenylene)methylene] or 2-hydroxy- <i>p</i> - toluenesulfonic acid, polymer with formaldehyde (C ₈ H ₅ O ₄ S)(C ₈ H ₆ O ₄ S) <i>n</i> (C ₇ H ₇ O ₄ S)
preclamolum preclamol	(-)-(S)- <i>m</i> -(1-propyl-3-piperidyl)phenol C ₁₄ H ₂₁ NO
prenoxdiazinum prenoxdiazine	1-[2-[3-(2,2-diphenylethyl)-1,2,4-oxadiazol-5-yl]ethyl]piperidine C ₂₃ H ₂₇ N ₅ O
prideperonum prideperone	5-cyano- <i>N</i> -[2-[4-(<i>p</i> -fluorobenzoyl)piperidino]ethyl]- <i>o</i> -anisamide C ₂₃ H ₂₄ FN ₃ O ₃
quadazocinum quadazocine	(-)-(2 <i>R</i> ,6 <i>S</i> ,11 <i>S</i>)-1-cyclopentyl-5-(1,2,3,4,5,6-hexahydro-8-hydroxy-3,6,11- trimethyl-2,6-methano-3-benzazocin-11-yl)-3-pentanone C ₂₅ H ₃₇ NO ₂
quazolastum quazolast	methyl 5-chlorooxazolo[4,5- <i>h</i>]quinoline-2-carboxylate C ₁₂ H ₇ ClN ₂ O ₃
quinezamidum quinezamide	<i>N</i> -(5-methylpyrazolo[1,5- <i>c</i>]quinazolin-1-yl)acetamide C ₁₃ H ₁₂ N ₄ O
ractopaminum ractopamine	(±)- <i>p</i> -hydroxy- α -[[(3-(<i>p</i> -hydroxyphenyl)-1-methylpropyl)amino]methyl]benzyl alcohol C ₁₈ H ₂₃ NO ₃
raloxifenum raloxifene	6-hydroxy-2-(<i>p</i> -hydroxyphenyl)benzo[<i>b</i>]thien-3-yl <i>p</i> -(2-piperidinoethoxy)- phenyl ketone C ₂₈ H ₂₇ NO ₄ S
ramciclanum ramciclane	2-[(2-benzyl-2-bornyl)oxy]- <i>N,N</i> -dimethylethylamine C ₂₁ H ₃₃ NO
ramixotidinum ramixotidine	<i>N</i> -[2-[[5-[(dimethylamino)methyl]furfuryl]thio]ethyl]nicotinamide 1-oxide C ₁₆ H ₂₁ N ₃ O ₃ S
ranimustinum ranimustine	methyl 6-[3-(2-chloroethyl)-3-nitrosoureido]-6-deoxy- α -D-glucopyranoside C ₁₉ H ₁₈ ClN ₃ O ₇
reboxetinum reboxetine	(±)-(2 <i>R</i> *)-2-[(<i>αR</i> *)- α -(<i>o</i> -ethoxyphenoxy)benzyl]morpholine C ₁₉ H ₂₃ NO ₃
recainamum recainam	1-[3-(isopropylamino)propyl]-3-(2,6-xylyl)urea C ₁₅ H ₂₅ N ₃ O
repirinastum repirinast	isopentyl 5,6-dihydro-7,8-dimethyl-4,5-dioxo-4 <i>H</i> -pyrano[3,2- <i>c</i>]quinoline-2- carboxylate C ₂₀ H ₂₁ NO ₅
rilmazafonum rilmazafone	5-[(2-aminoacetamido)methyl]-1-[4-chloro-2-(<i>o</i> -chlorobenzoyl)phenyl]- <i>N,N</i> - dimethyl-1 <i>H</i> -1,2,4-triazole-3-carboxamide C ₂₁ H ₂₀ Cl ₂ N ₆ O ₃

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Chemical Name or Description and Molecular Formulae

rimcazolum rimcazole	9-[3-(<i>cis</i> -3,5-dimethyl-1-piperazinyl)propyl]carbazole C ₂₁ H ₂₇ N ₃
rodorubicinum rodorubicin	{1 <i>S</i> ,3 <i>R</i> ,4 <i>R</i> }-3-ethyl-1,2,3,4,6,11-hexahydro-3,5,10,12-tetrahydroxy-6,11-dioxo-4-[[2,3,6-trideoxy-3-(dimethylamino)- α -L-lyxo-hexopyranosyl]oxy]-1-naphthacenyl O-3,6-dideoxy- α -L-erythro-hexopyranos-4-ulosyl-(1 $\rightarrow$ 4)-O-2,6-dideoxy- α -L-lyxo-hexopyranosyl-(1 $\rightarrow$ 4)-2,3,6-trideoxy-3-(dimethylamino)- α -L-lyxo-hexopyranoside, 2'',3'-anhydride C ₄₆ H ₆₄ N ₂ O ₁₇
rolziracetamum rolziracetam	dihydro-1 <i>H</i> -pyrrolizine-3,5(2 <i>H</i> ,6 <i>H</i>)-dione C ₇ H ₉ NO ₂
ronifibratum ronifibrate	3-hydroxypropyl nicotinate, 2-(<i>p</i> -chlorophenoxy)-2-methylpropionate (ester) C ₁₈ H ₂₀ ClNO ₅
roxatidinum roxatidine	<i>N</i> -[3-[(α -piperidino- <i>m</i> -tolyl)oxy]propyl]glycolamide C ₁₇ H ₂₆ N ₂ O ₃
roxithromycinum roxithromycin	erythromycin 9-[O-[(2-methoxyethoxy)methyl]oxime] C ₄₁ H ₇₆ N ₂ O ₁₅
salmeterolum salmeterol	($\pm$)-4-hydroxy- α' -[[[6-(4-phenylbutoxy)hexyl]amino]methyl]- <i>m</i> -xylene- α,α' -diol C ₂₅ H ₃₇ NO ₄
solipecainolum solipecainol	(1 <i>R</i> *,2 <i>S</i> *)-2-[[[(<i>S</i> *)-1-methyl-2-phenoxyethyl]amino]-1-phenyl-1,3-propanediol C ₁₈ H ₂₅ NO ₃
sometribovum sometribove	<i>N</i> -L-methionylgrowth hormone (ox) C ₉₇₈ H ₁₅₄₀ N ₂₆₅ O ₂₈₆ S ₉
sometriporum sometripor	methionyl growth hormone (pig)
spizofuronum spizofurone	5-acetylspiro[benzofuran-2(3 <i>H</i>),1'-cyclopropan]-3-one C ₁₂ H ₁₀ O ₃
sufotidinum sufotidine	1-[<i>m</i> -3-[[1-methyl-3-[(methylsulfonyl)methyl]-1 <i>H</i> -1,2,4-triazol-5-yl]amino]-propoxy]benzyl]piperidine C ₂₆ H ₃₁ N ₅ O ₃ S
sulfasalazinum sulfasalazine	5-[<i>p</i> -(2-pyridylsulfamoyl)phenylazo]salicylic acid C ₁₈ H ₁₄ N ₄ O ₅ S
sulotrobanum sulotroban	[<i>p</i> -(2-benzenesulfonamidoethyl)phenoxy]acetic acid C ₁₆ H ₁₇ NO ₅ S
sumacetamolom sumacetamol	<i>N</i> -acetyl-DL-methionine, ester with 4'-hydroxyacetanilide C ₁₅ H ₂₀ N ₂ O ₄ S
suricainidum suricainide	3-[2-(diethylamino)ethyl]-1-isopropyl-1-[2-(phenylsulfonyl)ethyl]urea C ₁₈ H ₃₁ N ₃ O ₃ S
tampraminum tampramine	11-[3-(dimethylamino)propyl]-6-phenyl-11 <i>H</i> -pyrido[2,3- <i>b</i>][1,4]benzodiazepine C ₂₃ H ₂₄ N ₄

teceleukinum teceleukin	<i>N</i> -L-methionylinterleukin 2 (human protein moiety reduced)
temarotenum temarotene	1,2,3,4-tetrahydro-1,1,4,4-tetramethyl-6-[(<i>E</i>)- α -methylstyryl]naphthalene $C_{23}H_{28}$
temelastinum temelastine	2-[[4-(5-bromo-3-methyl-2-pyridyl)butyl]amino]-5-[(6-methyl-3-pyridyl)methyl]-4(1 <i>H</i>)-pyrimidinone $C_{27}H_{24}BrN_5O$
tenamfetaminum tenamfetamine	($\pm$)- α -methyl-3,4-(methylenedioxy)phenethylamine $C_{10}H_{13}NO_2$
tepirindolum tepirindole	5-chloro-3-(1,2,3,6-tetrahydro-1-propyl-4-pyridyl)indole $C_{16}H_{19}ClN_2$
tilomisolum tilomisole	3-(<i>p</i> -chlorophenyl)thiazolo[3,2- <i>a</i>]benzimidazole-2-acetic acid $C_{17}H_{11}ClN_2O_2S$
timelotemum timelotem	($\pm$)-10-fluoro-1,2,3,4,4a,5-hexahydro-3-methyl-7-(2-thienyl)pyrazino[1,2- <i>a</i>][1,4]benzodiazepine $C_{17}H_{18}FN_3S$
tipentosinum tipentoin	($\pm$)-6,7-dihydro-5-[[[(1 <i>R</i> *,2 <i>R</i> *,3 <i>R</i> *)-2-hydroxy-3-phenoxy-cyclopentyl]-amino]methyl]-2-methylbenzo[<i>b</i>]thiophen-4(5 <i>H</i>)-one $C_{27}H_{28}NO_3S$
trazii esilas trazium esilate	1-(<i>p</i> -chlorophenyl)-1,2-dihydro-1-hydroxy- <i>as</i> -triazino[6,1- <i>a</i>]isoquinolin-5-ium ethanesulfonate $C_{18}H_{14}ClN_3O_4S$
tribendilolum tribendilol	($\pm$)-1-(1 <i>H</i> -benzotriazol-4-yloxy)-3-[[2-(<i>o</i> -methoxyphenoxy)ethyl]-amino]-2-propanol $C_{18}H_{22}N_4O_4$
tropanserinum tropanserine	1 α H,5 α H-tropan-3 α -yl 3,5-dimethylbenzoate $C_{17}H_{23}NO_2$
tuvatidinum tuvatidine	[4-[[[2-[(5-amino-4-methyl-4 <i>H</i> -1,2,4,6-thiatriazin-3-yl)amino]ethyl]thio]methyl]-2-thiazolyl]guanidine <i>S''</i> . <i>S''</i> -dioxide $C_{10}H_{17}N_5O_2S_3$
ulobetasolum ulobetasol	21-chloro-6 α ,9-difluoro-11 β ,17-dihydroxy-16 β -methylpregna-1,4-diene-3,20-dione $C_{22}H_{27}ClF_2O_4$
xenalipinum xenalipin	4'-(trifluoromethyl)-2-biphenylcarboxylic acid $C_{14}H_9F_3O_2$
zacopridum zacopride	4-amino-5-chloro- <i>N</i> -3-quinuclidinyl- <i>o</i> -anisamide $C_{15}H_{20}ClN_3O_2$
zafuleptinum zafuleptine	($\pm$)-7-[(<i>p</i> -fluorobenzyl)amino]-8-methylnonanoic acid $C_{17}H_{28}FNO_2$
zaltidinum zaltidine	[4-(2-methylimidazol-5-yl)-2-thiazolyl]guanidine $C_8H_{10}N_6S$

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zindotrinum zindotrine	8-methyl-6-piperidino-s-triazolo[4,3- <i>b</i>]pyridazine $C_{11}H_{13}N_5$
zindoxifenum zindoxifene	1-ethyl-2-(<i>p</i> -hydroxyphenyl)-3-methylindol-5-ol diacetate (ester) $C_{21}H_{21}NO_4$
zoliprofenum zoliprofen	(±)- <i>p</i> -(2-thiazolyloxy)hydratropic acid $C_{12}H_{11}NO_3S$

**AMENDMENTS
TO PREVIOUS LISTS**

Vol. 13, No. 12

Recommended International Nonproprietary Names (Rec. INN): List 3

p. 2	<i>delete</i>	<i>insert</i>
	amphetaminum	amfetaminum
	amphetamine	amfetamine

Vol. 19, Nos. 4, 5, 6

Recommended International Nonproprietary Names (Rec. INN): List 5

p. 3	<i>delete</i>	<i>insert</i>
	benzphetaminum	benzfetaminum
	benzphetamine	benzfetamine

Vol. 20, No. 11

Recommended International Nonproprietary Names (Rec. INN): List 6

p. 427	<i>delete</i>	<i>insert</i>
	hydroxyamphetaminum	hydroxyamfetaminum
	hydroxyamphetamine	hydroxyamfetamine
p. 428	metamphetaminum	metamfetaminum
	metamphetamine	metamfetamine

Supplement to Vol. 35, No. 5

Recommended International Nonproprietary Names (Rec. INN): List 21

p. 6	<i>delete</i>	<i>insert</i>
	heparinum	heparinum natricum
	heparine	heparin sodium

AMENDMENTS TO PREVIOUS LISTS

Supplement to Vol. 39, No. 5

Recommended International Nonproprietary Names (Rec. INN): List 25

p 14	interferonum alfa interferon alfa	<i>In the first paragraph of the definition replace the part after e.g. interferon alfa-2 by The numbers conform with the recommendations of the Interferon Nomenclature Committee.</i>
	interferonum gamma interferon gamma	<i>After the table replace the sentence: Further assignments will be made by the World Health Organization on request by Mixtures of interferon alfa proteins will be designated as. interferon alfa-n1, -n2 etc where the number has to be assigned by an approved national authority at the time of approval of the product</i>
15	oxacillinum oxacillin	<i>Complete the definition with the following sentence: subspecies of the human gamma gene produce protein variants designated by the hyphenated addition of a number and a letter, e.g. interferon gamma-1a, -2a etc where the number and letter have to be assigned by an approved national authority at the time of approval of the product.</i>
		<i>In the chemical name replace phenyl-2-isoxazoline-4-carboxamide by phenyl-4-isoxazolecarboxamido</i>