

# 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\*, the following names 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 of the use of the substance in medicine or pharmacy.

## Recommended International Nonproprietary Names (Rec. INN): List 31

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

<i>Recommended International Nonproprietary Name (Latin, English)</i>	<i>Chemical Name or Description and Molecular Formula</i>
abanoquilm abanoquil	4-amino-2-(3,4-dihydro-6,7-dimethoxy-2(1H)-isoquinolyl)-6,7-dimethoxy- quinoline $C_{22}H_{25}N_3O_4$
acadesinum acadesine	5-amino-1- $\beta$ -D-ribofuranosylimidazole-4-carboxamide $C_9H_{14}N_4O_5$
acidum gadobenicum gadobenic acid	dihydrogen [( $\pm$ )-4-carboxy-5,8,11-tris(carboxymethyl)-1-phenyl-2-oxa-5,8,11- triazatridecan-13-oato(5-)]gadolinate(2-) $C_{22}H_{26}GdN_3O_{11}$
acidum penteticum pentetic acid	<i>N,N</i> -bis[2-[bis(carboxymethyl)amino]ethyl]glycine $C_{14}H_{23}N_3O_{10}$
aprololum adaprolol	2-(1-adamantyl)ethyl ( $\pm$ )-[ <i>p</i> -(2-hydroxy-3-(isopropylamino)- propoxy)phenyl]acetate $C_{26}H_{39}NO_4$

\* Official Records of the World Health Organization, 1955, 60, 3 (Resolution EB15.R7); 1969, 173, 10 (Resolution EB43.R9).

*Recommended International  
Nonproprietary Name  
(Latin, English)*

*Chemical Name or Description and Molecular Formula*

adosopinum	<i>N</i> -(5,6-dihydro-5-methyl-6,11-dioxo-10-morphanthrindinyl)acetamide <chem>C17H14N2O3</chem>
adozelesinum adozelesin	(7 <i>b</i> ,8 <i>a</i> , <i>S</i> )- <i>N</i> -[2-[(4,5,8,8 <i>a</i> -tetrahydro-7-methyl-4-oxocyclopropa[ <i>c</i> ]pyrrolo-[3,2- <i>e</i> ]indol-2(1 <i>H</i> )-yl]carbonyl]indol-5-yl]-2-benzofurancarboxamide <chem>C30H22N4O4</chem>
afalaninum afalanine	<i>N</i> -acetyl-3-phenyl- <i>D,L</i> -alanine or <i>N</i> -acetyl- <i>D,L</i> -phenylalanine <chem>C11H13NO3</chem>
aldesleukinum aldesleukin	125- <i>L</i> -serine-2-133-interleukin 2 (human reduced) <chem>C490H1115N177O203S6</chem>
alentemolum alentemol	(+)-2-(dipropylamino)-2,3-dihydrophenalen-5-ol <chem>C19H29NO</chem>
almokalantum almokalant	( $\pm$ )- <i>p</i> -[3-[ethyl[3-(propylsulfinyl)propyl]amino]-2-hydroxypropoxy]benzonitrile <chem>C18H28N2O3S</chem>
ameltolidum ameltolide	4-amino-2',6'-benzoxylidide <chem>C15H16N2O</chem>
angiotensinum II angiotensin II	5- <i>L</i> -isoleucineangiotensin II The species specificity should be indicated in brackets after the name. <chem>C50H71N13O12</chem>
aprikalimum aprikalim	(-)-(R*,2R*)-tetrahydro- <i>N</i> -methyl-2-(3-pyridyl)thio-2 <i>H</i> -thiopyran-2-carboxamide 1-oxide <chem>C12H16N2OS2</chem>
aproslatum natricum aproslute sodium	<i>N,N'</i> -trimethylenebis[lactobionamide] hexadecakis(sodium sulfate) (ester) <chem>C27H34N2Na16O70S16</chem>
arbutaminum arbutamine	( <i>R</i> )-3,4-dihydroxy- <i>a</i> -[[[4-( <i>p</i> -hydroxyphenyl)butyl]amino]methyl]benzyl alcohol <chem>C18H23NO4</chem>
asobamastum asobamast	2-ethoxyethyl [4-(3-methyl-5-isoxazolyl)-2-thiazolyl]oxamate <chem>C13H15N3O5S</chem>
avizafonum avizafone	2'-benzoyl-4'-chloro-2-[( <i>S</i> )-2,6-diaminohexanamido]- <i>N</i> -methylacetanilide <chem>C22H27ClN4O3</chem>
barnidipinum barnidipine	(+)-(3' <i>S,4S</i> )-1-benzyl-3-pyrrolidinyl methyl 1,4-dihydro-2,6-dimethyl-4-( <i>m</i> -nitrophenyl)-3,5-pyridinedicarboxylate <chem>C27H29N3O6</chem>

*Recommended International  
Nonproprietary Name  
(Latin, English)*

*Chemical Name or Description and Molecular Formula*

batelapinum batelapine	2-methyl-5-(4-methyl-1-piperazinyl)-11 <i>H</i> -s-triazolo[1,5- <i>c</i> ][1,3]benzodiazepine $C_{16}H_{20}N_6$
bemesetronum bemesetron	<i>endo</i> -8-methyl-8-azabicyclo[3.2.1]oct-3-yl 3,5-dichlorobenzoate $C_{14}H_{17}Cl_2NO_2$
berafenonum berafenone	( $\pm$ )-1-(2-biphenyloxy)-3-( <i>tert</i> -butylamino)-2-propanol $C_{19}H_{25}NO_2$
bertosamilum bertosamil	3'-isobutyl-7'-isopropylspiro[cyclohexane-1,9'-[3,7]diazabicyclo[3.3.1]nonane] $C_{19}H_{36}N_2$
betamipronum betamipron	<i>N</i> -benzoyl- $\beta$ -alanine $C_{10}H_{11}NO_3$
'disomidum .disomide	( $\pm$ )- $\alpha$ -( <i>o</i> -chlorophenyl)- $\alpha$ -[2-( <i>N</i> -isopropylacetamido)ethyl]-1-piperidine-butyramide $C_{22}H_{34}ClN_3O_2$
bimakalimum bimakalim	2,2-dimethyl-4-(2-oxo-1(2 <i>H</i> )-pyridyl)-2 <i>H</i> -1-benzopyran-6-carbonitrile $C_{17}H_{14}N_2O_2$
bindaritum bindarit	2-[(1-benzyl-1 <i>H</i> -indazol-3-yl)methoxy]-2-methylpropionic acid $C_{19}H_{20}N_2O_3$
brinazaronum brinazarone	<i>p</i> -[3-( <i>tert</i> -butylamino)propoxy]phenyl 2-isopropyl-3-indolizinyl ketone $C_{29}H_{32}N_2O_2$
butixocortum butixocort	11 <i>β</i> ,17-dihydroxy-21-mercaptopregn-4-ene-3,20-dione 17-butyrate $C_{25}H_{36}O_5S$
caldiamidum caldiamide	hydrogen [ <i>N,N</i> -bis[2-[(carboxymethyl)[(methylcarbamoyl)methyl]amino]ethyl]glycinato(3-)]calcium[1-] $C_{16}H_{27}CaN_5O_8$
'peritidum varperitide	L-seryl-L-leucyl-L-arginyl-L-arginyl-L-seryl-L-seryl-L-cysteinyl-L-phenylalanylglycylglycyl-L-arginyl-L-methionyl-L-aspartyl-L-arginyl-L-isoleucylglycyl-L-alanyl-L-glutaminyl-L-serylglycyl-L-leucylglycyl-L-cysteinyl-L-asparaginyl-L-seryl-L-phenylalanyl-L-arginyl-L-tyrosine cyclic(7 $\rightarrow$ 23)-disulfide $C_{127}H_{203}N_{45}O_{39}S_3$
cefclidinium cefclidin	(+)-1-[(6 <i>R,7R</i> )-7-[2-(5-amino-1,2,4-thiadiazol-3-yl)glyoxylamido]-2-carboxy-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-en-3-yl]methyl]-4-carbamoylquinuclidinium hydroxide, inner salt, 7 <sup>2</sup> -( <i>Z</i> )-(O-methyloxime) $C_{21}H_{26}N_5O_6S_2$
cefdaloximum cefdaloxime	(+)-(6 <i>R,7R</i> )-7-[2-(2-amino-4-thiazoly)glyoxylamido]-3-(methoxymethyl)-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7 <sup>2</sup> -( <i>Z</i> )-oxime $C_{14}H_{15}N_5O_6S_2$



<i>Recommended International Nonproprietary Name (Latin, English)</i>	<i>Chemical Name or Description and Molecular Formula</i>
dexamplatinum dexamplatin	(+)- <i>trans</i> -tetrachloro(1,2-cyclohexanediamine)platinum $C_6H_{14}Cl_4N_2Pt$
didanosinum didanosine	2',3'-dideoxyinosine $C_{10}H_{12}N_4O_3$
diethyltoluamide diethyltoluamide	<i>N,N</i> -diethyl- <i>m</i> -toluamide $C_{12}H_{17}NO$
dofetilidum dofetilide	$\beta$ -[( <i>p</i> -methanesulfonamidophenethyl)methylamino]methanesulfono- <i>p</i> -phenetidine $C_{19}H_{27}N_3O_5S_2$
doramectinum doramectin	25-cyclohexyl-5- <i>O</i> -demethyl-25-de(1-methylpropyl)avermectin A <sub>1a</sub> , or (2a <i>E</i> ,4 <i>E</i> ,8 <i>E</i> )-(5' <i>S</i> ,6 <i>S</i> ,6' <i>R</i> ,7 <i>S</i> ,11 <i>R</i> ,13 <i>S</i> ,15 <i>S</i> ,17 <i>aR</i> ,20 <i>R</i> ,20 <i>aR</i> ,20 <i>bS</i> )-6'-cyclohexyl-5',6,6',7,10,11,14,15,17 <i>a</i> ,20,20 <i>a</i> ,20 <i>b</i> -dodecahydro-20,20 <i>b</i> -dihydroxy-5',6,8,19-tetramethyl-17-oxospiro[11,15-methano-2 <i>H</i> ,13 <i>H</i> ,17 <i>H</i> -furo-[4,3,2- <i>pq</i> ][2,6]benzodioxacyclooctadecin-13,2'-[2 <i>H</i> ]pyran]-7-yl 2,6-dideoxy-4- <i>O</i> -(2,6-dideoxy-3- <i>O</i> -methyl- $\alpha$ -L-arabino-hexopyranosyl)-3- <i>O</i> -methyl- $\alpha$ -L-arabino-hexopyranoside $C_{50}H_{74}O_{14}$
draflazinum draflazine	( $\pm$ )-4'-amino-4-[5,5-bis( <i>p</i> -fluorophenyl)pentyl]-2-carbamoyl-2',6'-dichloro-1-piperazineacetanilide $C_{30}H_{33}Cl_2F_2N_5O_2$
eberconazolum eberconazole	( $\pm$ )-1-(2,4-dichloro-10,11-dihydro-5 <i>H</i> -dibenzo[ <i>a,d</i> ]cyclohepten-5-yl)imidazole $C_{16}H_{14}Cl_2N_2$
ecabetum ecabet	13-isopropyl-12-sulfopodocarpa-8,11,13-trien-15-oic acid $C_{20}H_{28}O_5S$
englitazonum englitazone	( $\pm$ )-5-[[2 <i>R</i> )-2-benzyl-6-chromanyl]methyl]-2-4-thiazolidinedione $C_{20}H_{19}NO_3S$
enloplatinum enloplatin	<i>cis</i> -(1,1-cyclobutanedicarboxylato)[tetrahydro-4 <i>H</i> -pyran-4,4-bis(methyl-amine)]platinum $C_{13}H_{22}N_2O_5Pt$
eprobemidum eprobemide	<i>p</i> -chloro- <i>N</i> -(3-morpholinopropyl)benzamide $C_{14}H_{19}ClN_2O_2$

<i>Recommended International Nonproprietary Name (Latin, English)</i>	<i>Chemical Name or Description and Molecular Formula</i>
fadrozolum fadrozole	( $\pm$ )- <i>p</i> -(5,6,7,8-tetrahydroimidazo[1,5- <i>a</i> ]pyridin-5-yl)benzonitrile $C_{14}H_{13}N_3$
fantofaronum fantofarone	1-[{ <i>p</i> -[3-[(3,4-dimethoxyphenethyl)methylamino]propoxy]phenyl}-sulfonyl]-2-isopropylindolizine $C_{13}H_{35}N_2O_5S$
fasudilum fasudil	hexahydro-1-(5-isoquinolylsulfonyl)-1 <i>H</i> -1,4-diazepine $C_{14}H_{17}N_3O_2S$
filgrastimum filgrastim	<i>N</i> -L-methionyl colony-stimulating factor (human clone 1034) $C_{845}H_{1339}N_{223}O_{243}S_9$
flosatidilum flosatidil	isobutyl [2-(dimethylamino)ethyl] [[[ <i>o</i> -(methylthio)phenyl]-[ <i>m</i> -(trifluoromethyl)benzyl]carbamoyl]methyl]carbamate $C_{26}H_{34}F_3N_3O_3S$
flosulidum flosulide	<i>N</i> -[6-(2,4-difluorophenoxy)-1-oxo-5-indanyl]methanesulfonamide $C_{16}H_{13}F_2NO_4S$
fluorodopum ( $^{18}F$ ) fluorodopa ( $^{18}F$ )	3-(2-fluoro- $^{18}F$ -4,5-dihydroxyphenyl)-L-alanine $C_9H_{10}^{18}FNO_4$
fomepizolum fomepizole	4-methylpyrazole $C_4H_6N_2$
gadodiamidum gadodiamide	aqua[ <i>N,N</i> -bis[2-[(carboxymethyl)[(methylcarbamoyl)methyl]amino]ethyl]-glycinato(3-)]gadolinium hydrate $C_{16}H_{28}GdN_3O_9 \cdot x H_2O$
gadoteridolum gadoteridol	( $\pm$ )-[10-(2-hydroxypropyl)-1,4,7,10-tetraazacyclodecane-1,4,7-triacetato(3-)]gadolinium $C_{17}H_{25}GdN_4O_7$
giracodazolum giracodazole	( <i>aS</i> )-2-amino- <i>a</i> -[(1 <i>S</i> )-2-amino-1-chloroethyl]imidazole-4-methanol $C_6H_{11}ClN_4O$
ibutilidum ibutilide	( $\pm$ )-4'-[4-(ethylheptylamino)-1-hydroxybutyl]methanesulfonanilide $C_{20}H_{36}N_2O_3S$
irinotecanum irinotecan	(+)-7-ethyl-10-hydroxycamptothechine 10-[1,4'-biperidine]-1'-carboxylate or (+)-(S)-4,11-diethyl-4,9-dihydroxy-1 <i>H</i> -pyrano[3',4':6,7]indolizino[1,2- <i>b</i> ]-quinoline-3,14(4 <i>H</i> ,12 <i>H</i> )-dione 9-[1,4'-biperidine]-1'-carboxylate $C_{33}H_{36}N_4O_6$
isalsteatum isalsteine	( $\pm$ )- <i>N</i> -[2-[(2-methyl-4-oxo-1,3-benzodioxan-2-yl)thio]propionyl]glycine $C_{14}H_{15}NO_6S$
lactitolum lactitol	4-O- $\beta$ -D-galactopyranosyl- $\alpha$ -glucitol $C_{12}H_{24}O_{11}$

<i>Recommended International Nonproprietary Name (Latin, English)</i>	<i>Chemical Name or Description and Molecular Formula</i>
lanreotidum lanreotide	3-(2-naphthyl)- $\alpha$ -alanyl- $\omega$ -cysteinyl- $\omega$ -tyrosyl- $\alpha$ -tryptophyl- $\omega$ -lysyl- $\omega$ -valyl- $\omega$ -cysteinyl- $\omega$ -threoninamide, cyclic (2 $\rightarrow$ 7)-disulfide $C_{54}H_{68}N_{11}O_{10}S_2$
ledazerolum ledazerol	2-hydroxy-3-(imidazol-4-ylmethyl)benzyl alcohol $C_{11}H_{12}N_2O_2$
lenograstimum lenograstim	133-[ $O$ -( $N$ -acetyl- $\alpha$ -neuraminosyl)-(2 $\rightarrow$ 3)-[ $O$ - $\beta$ - $\alpha$ -galactopyranosyl-(1 $\rightarrow$ 3)]-2-acetamido-2-deoxy- $\beta$ -D-galactopyranosyl]-L-threonine]colony-stimulating factor (human clone 1034) mixture with 133-[ $O$ -( $N$ -acetyl- $\alpha$ -neuraminosyl)-(2 $\rightarrow$ 6)- $O$ -[ $O$ -( $N$ -acetyl- $\alpha$ -neuraminosyl)-(2 $\rightarrow$ 3)- $\beta$ -D-galactopyranosyl-(1 $\rightarrow$ 3)]-2-acetamido-2-deoxy- $\beta$ -D-galactopyranosyl]-L-threonine]-colony-stimulating factor (human clone 1034)
leuciglumerum leuciglumer	L-leucine polymer with 5-methyl hydrogen L-glutamate $(C_6H_{13}NO_2)_m \cdot (C_6H_{11}NO_4)_n$
.eurubicinum leurubicin	(8 <i>S</i> ,10 <i>S</i> )-10-[[3-[( <i>S</i> )-2-amino-4-methylvaleramido]-2,3,6-trideoxy- $\alpha$ -L-xylohexopyranosyl]oxy]-8-glycoloyl-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-5,12-naphthacenedione $C_{33}H_{40}N_2O_{12}$
levofloxacinum levofloxacin	( $-$ )-( <i>S</i> )-9-fluoro-2,3-dihydro-3-methyl-10-(4-methyl-1-piperazinyl)-7-oxo-7 <i>H</i> -pyrido[1,2,3- <i>de</i> ]-1,4-benzoxazine-6-carboxylic acid $C_{18}H_{20}FN_3O_4$
levomentholum levomenthol	( $-$ )-(1 <i>R</i> ,3 <i>R</i> ,4 <i>S</i> )-menthol $C_{10}H_{20}O$
levosulpiridum levosulpiride	( $-$ )- <i>N</i> -[( <i>S</i> )-1-ethyl-2-pyrrolidinyl]methyl]-5-sulfamoyl- <i>o</i> -anisamide $C_{15}H_{23}N_3O_4S$
liarozolum liarazole	( $\pm$ )-5-( <i>m</i> -chloro- $\alpha$ -imidazol-1-ylbenzyl)benzimidazole $C_{17}H_{19}ClN_4$
liranaftatum anaftate	<i>O</i> -(5,6,7,8-tetrahydro-2-naphthyl) 6-methoxy- <i>N</i> -methylthio-2-pyridinecarbamate $C_{18}H_{20}N_2O_2S$
lisadimatum lisadimate	( $\pm$ )-glycerol 1-( <i>p</i> -aminobenzoate) $C_{16}H_{13}NO_4$
litoxetinum litoxetine	4-(2-naphthylmethoxy)piperidine $C_{16}H_{19}NO$
lometrexolum lometrexol	<i>N</i> -[ <i>p</i> -[2-[( <i>R</i> )-2-amino-3,4,5,6,7,8-hexahydro-4-oxopyrido[2,3- <i>d</i> ]pyrimidin-6-yl]ethyl]benzoyl]-L-glutamic acid $C_{21}H_{25}N_5O_6$

*Recommended International  
Nonproprietary Name  
(Latin, English)*

*Chemical Name or Description and Molecular Formula*

<i>Recommended International Nonproprietary Name (Latin, English)</i>	<i>Chemical Name or Description and Molecular Formula</i>
loteprednol loteprednol	chloromethyl 11 $\beta$ ,17-dihydroxy-3-oxoandrosta-1,4-diene-17 $\beta$ -carboxylate $C_{21}H_{27}ClO_5$
loxoribinum loxoridine	7-allyl-2-amino-9- $\beta$ -D-ribofuranosylpurine-6,8(1 <i>H</i> ,9 <i>H</i> )-dione $C_{13}H_{17}N_5O_6$
lufironium lufironil	<i>N,N'</i> -bis(2-methoxyethyl)-2,4-pyridinedicarboxamide $C_{13}H_{19}N_3O_4$
mabuprofenum mabuprofen	( $\pm$ )- <i>N</i> -(2-hydroxyethyl)- <i>p</i> -isobutylhydratropamide $C_{15}H_{23}NO_2$
masoprololum masoprolol	<i>meso</i> -4,4'-(2,3-dimethyltetramethylene)dipyrocatechol $C_{16}H_{22}O_4$
melarsominum melarsomine	bis(2-aminoethyl) <i>p</i> -{[4,6-diamino- <i>s</i> -triazin-2-yl]amino}dithiobenzene arsonite $C_{13}H_{21}AsN_4S_2$
midesteinum midesteine	2-thiophenecarbothioic acid, <i>S</i> -ester with ( $\pm$ )-2-mercaptop- <i>N</i> -(tetrahydro-2-oxo-3-thienyl)propionamide $C_{12}H_{13}NO_3S_3$
minamestanum minamestane	4-aminoandrosta-1,4,6-triene-3,17-dione $C_{19}H_{23}NO_2$
mirragosidum mirragoside	<i>N</i> -(II $^3$ - <i>N</i> -acetylneuraminosylgangliotetraosyl)ceramide, isopropyl ester $C_{76}H_{137}N_3O_{31}$
mirfentanilum mirfentanil	<i>N</i> -(1-phenethyl-4-piperidyl)- <i>N</i> -pyrazinyl-2-furamide $C_{22}H_{24}N_4O_2$
miripirini chloridum miripirium chloride	1-tetradecyl-4-picolinium chloride $C_{20}H_{36}CIN$
mivazerolum mivazerol	$\alpha$ -imidazol-4-yl-2,3-cresotamide $C_{11}H_{11}N_3O_2$
mizolastinum mizolastine	2-[[1-[1-( <i>p</i> -fluorobenzyl)-2-benzimidazolyl]-4-piperidyl]methyamino]-4(3 <i>H</i> )-pyrimidinone $C_{24}H_{25}FN_6O$
modecainidum modecainide	( $\pm$ )-2'-(2-(1-methyl-2-piperidyl)ethyl)vanillanilide $C_{22}H_{28}N_2O_3$
mofezolacum mofezolac	3,4-bis( <i>p</i> -methoxyphenyl)-5-isoxazoleacetic acid $C_{19}H_{17}NO_5$

*Recommended International  
Nonproprietary Name  
(Latin, English)*

*Chemical Name or Description and Molecular Formula*

molgramostimum molgramostim	colony-stimulating factor 2 (human clone pHG <sub>25</sub> protein moiety reduced) <chem>C63H100N171O196S8</chem> (for non-glycosylated protein)
mosapraminum mosapramine	( $\pm$ )-1'-(3-(3-chloro-10,11-dihydro-5 <i>H</i> -dibenz[ <i>b,f</i> ]azepin-5-yl)propyl]hexahydro-spiro[imidazo[1,2- <i>a</i> ]pyridine-3(2 <i>H</i> ),4'-piperidin]-2-one <chem>C28H35ClN4O</chem>
nadifloxacinum nadifloxacin	( $\pm$ )-9-fluoro-6,7-dihydro-8-(4-hydroxypiperidino)-5-methyl-1-oxo-1 <i>H,5H</i> -benzo[ <i>i/j</i> ]quinolizine-2-carboxylic acid <chem>C19H21FN2O4</chem>
nadroparinum calcicum nadroparin calcium	Calcium salt of depolymerized heparin obtained by nitrous acid degradation of heparin from pork intestinal mucosa; the majority of the components have a 2- <i>O</i> -sulfo- $\alpha$ -L-idopyranosuronic acid structure at the non-reducing end and a 6- <i>O</i> -sulfo-2,5-anhydro- $\alpha$ -mannitol structure at the reducing end of their chain; the average relative molecular mass is 4000 to 5000; the degree of sulfatation is about 2,1 per disaccharide unit.
nafagrelum nafagrel	( $\pm$ )-5,6,7,8-tetrahydro-6-(imidazol-1-ylmethyl)-2-naphthoic acid <chem>C15H18N2O2</chem>
nafarelinum nafarelin	5-oxo-L-prolyl-L-histidyl-L-tryptophyl-L-seryl-L-tyrosyl-3-(2-naphthyl)-D-alanyl-L-leucyl-L-arginyl-L-prolylglycinamide <chem>C68H83N17O13</chem>
naroparcilum naroparcil	<i>p</i> -[ <i>p</i> -(5-thio-D-xylopyranosyl)thio]benzoyl]benzonitrile <chem>C19H17NO4S2</chem>
nemazolinum nemazoline	2-(4-amino-3,5-dichlorobenzyl)-2-imidazoline <chem>C10H11Cl2N3</chem>
nemonapridum nemonapride	( $\pm$ )- <i>cis</i> - <i>N</i> -(1-benzyl-2-methyl-3-pyrrolidinyl)-5-chloro-4-(methylamino)- <i>D</i> -anisamide <chem>C21H26ClN3O2</chem>
nestifyllinum nestifylline	7-(1,3-dithiolan-2-ylmethyl)theophylline <chem>C11H14N4O2S2</chem>
neticonazolum neticonazole	( <i>E</i> )-1-[2-(methylthio)-1-[ <i>D</i> -(pentyloxy)phenyl]vinyl]imidazole <chem>C17H22N2OS</chem>
nicoracetamum nicoracetam	1-(6-methoxynicotinoyl)-2-pyrrolidinone <chem>C11H12N2O3</chem>
ocaperidonium ocaperidone	3-[2-[4-(6-fluoro-1,2-benzisoxazol-3-yl)piperidino]ethyl]-2,9-dimethyl-4 <i>H</i> -pyrido[1,2- <i>a</i> ]pyrimidin-4-one <chem>C24H25FN4O2</chem>

<i>Recommended International Nonproprietary Name (Latin, English)</i>	<i>Chemical Name or Description and Molecular Formula</i>
ormaplatinum ormaplatin	( $\pm$ )- <i>trans</i> -tetrachloro(1,2-cyclohexanediamine)platinum $C_6H_{14}Cl_4N_2Pt$
otenzepadum otenzepad	( $\pm$ )-11-[[2-[(diethylamino)methyl]piperidino]acetyl]-5,11-dihydro-6 <i>H</i> -pyrido[2,3- <i>b</i> ][1,4]benzodiazepin-6-one $C_{24}H_{31}N_5O_2$
oxiglutationum oxiglutatione	<i>N,N'</i> -[dithiobis[( <i>R</i> )-1-[(carboxymethyl)carbamoyl]ethylene]]di-L-glutamine $C_{20}H_{32}N_6O_{12}S_2$
palonidipinum palonidine	( $\pm$ )-3-(benzylmethylamino)-2,2-dimethylpropyl methyl 4-(2-fluoro-5-nitrophenyl)-1,4-dihydro-2,6-dimethyl-3,5-pyridinedicarboxylate $C_{29}H_{34}FN_3O_6$
panipenemum panipenem	(+)-(5 <i>R,6S</i> )-3-[[( <i>S</i> )-1-acetimidoyl-3-pyrrolidinyl]thio]-6-[( <i>R</i> )-1-hydroxyethyl]-7-oxo-1-azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid $C_{15}H_{21}N_3O_4S$
parnaparinum naticum 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- <i>O</i> -sulfo- <i>a</i> -L-idopyranosuronic acid structure at the non-reducing end and a 2- <i>N</i> ,6- <i>O</i> -di-sulfo- <i>D</i> -glucosamine structure at the reducing end of their chain; the average relative molecular mass is between 4000 and 6000 (5000 $\pm$ 20 per cent); the degree of sulfatation is 2,15 ( $\pm$ 10 per cent) per disaccharidic unit.
pegademasum pegademase	adenosine deaminase, reaction product with succinic anhydride, esters with polyethylene glycol monomethyl ether The species specificity should be indicated in brackets after the name.
pegaspargasum pegasparease	asparaginase, reaction product with succinic anhydride, esters with polyethylene glycol monomethyl ether
picumeterolum picumeterol	(-)( <i>R</i> )-4-amino-3,5-dichloro- <i>a</i> -[[6-[2-(2-pyridyl)ethoxy]hexyl]amino]-methylbenzyl alcohol $C_{21}H_{29}Cl_2N_3O_2$
pidotimodum pidotimod	( <i>R</i> )-3-[( <i>S</i> )-5-oxopropyl]-4-thiazolidinecarboxylic acid $C_9H_{12}N_2O_4S$
pirodavirum pirodavir	ethyl $\rho$ -[2-[1-(6-methyl-3-pyridazinyl)-4-piperidyl]ethoxy]benzoate $C_{21}H_{27}N_3O_3$
piodomastum piodomast	4-hydroxy-1-phenyl-3-(1-pyrrolidinyl)-1,8-naphthyridin-2(1 <i>H</i> )-one $C_{18}H_{17}N_3O_2$
porfimerum naticum porfimer sodium	photofrin II

<i>Recommended International Nonproprietary Name (Latin, English)</i>	<i>Chemical Name or Description and Molecular Formula</i>
prinoxodanum prinoxodan	3,4-dihydro-3-methyl-6-(1,4,5,6-tetrahydro-6-oxo-3-pyridazinyl)-2(1 <i>H</i> )-quinazolinone $C_{13}H_{14}N_4O_2$
prisotinolum prisotinol	( $\pm$ )-6-[2-(isopropylamino)propyl]-3-pyridinol $C_{11}H_{15}N_2O$
propagermanium propagermanium	polymer obtained from 3-(trihydroxygermyl)propionic acid $(C_9H_5GeO_{3.5})_n$
quinotolastum quinotolast	4-oxo-1-phenoxy- <i>N</i> -1 <i>H</i> -tetrazol-5-yl-4 <i>H</i> -quinolizine-3-carboxamide $C_{17}H_{12}N_6O_3$
quinupristinum quinupristin	<i>N</i> -[(6 <i>R</i> ,9 <i>S</i> ,10 <i>R</i> ,13 <i>S</i> ,15 <i>a</i> <i>S</i> ,22 <i>S</i> ,24 <i>a</i> <i>S</i> )-22-[ <i>p</i> -(dimethylamino)benzyl]-6-ethyl-docosahydro-10,23-dimethyl-5,8,12,15,17,21,24-heptaexo-13-phenyl-18-[[ <i>(3S)</i> -quinuclidinylthio]methyl]-12 <i>H</i> -pyrido[2,1- <i>J</i> ]pyrrolo[2,1- <i>I</i> ][1,4,7,10,13,16]oxapentaaacyclononadecin-9-yl]-3-hydroxypicolinamide $C_{53}H_{67}N_9O_{10}S$
racementholum: racementhol	( $\pm$ )-(1 <i>R</i> <sup>+</sup> ,3 <i>R</i> <sup>+</sup> ,4 <i>S</i> <sup>+</sup> )-menthol $C_{10}H_{20}O$
regramostimum regramostim	colony-stimulating factor 2 (human clone pCSF-1 protein moiety reduced), glycoform GMC 89-107 $C_{637}H_{1003}N_{171}O_{197}S_8$
repagermanium repagermanium	poly- <i>trans</i> -[(2-carboxyethyl)germasesquioxane] $(C_{18}H_{30}Ge_4O_{21})_n$
reviparinum natricum reviparin sodium	Sodium salt of depolymerized heparin obtained by nitrous acid degradation of heparin from pork intestinal mucosa, the majority of the components have a 2- <i>O</i> -sulfo- <i>α</i> -L-idopyranosuronic acid structure at the non-reducing end and a 6- <i>O</i> -sulfo-2,5-anhydro- <i>D</i> -mannitol structure at the reducing end of their chain; the average relative molecular mass is 3500 to 4500, 90 per cent of which ranging between 2000 and 8000; the degree of sulfatation is about 2.2 per disaccharidic unit.
'spenzepinum .ispenezepine	( $\pm$ )-6,11-dihydro-11-(1-methylnepetoyl)-5 <i>H</i> -pyrido[2,3- <i>b</i> ][1,5]benzodiazepin-5-one $C_{19}H_{20}N_4O_2$
ritolukastum ritolukast	1,1,1-trifluoro- <i>α</i> -2-quinolylmethanesulfon- <i>m</i> -aniside $C_{17}H_{13}F_3N_2O_3S$
roxadimatum roxadimate	ethyl ( $\pm$ )- <i>p</i> -[bis(2-hydroxypropyl)amino]benzoate $C_{15}H_{23}NO_4$
sagandipinum sagandipine	methyl (5-piperidinomethyl)furfuryl 4-( <i>o</i> -fluorophenyl)-1,4-dihydro-2,6-dimethyl-3,5-pyridinedicarboxylate $C_{27}H_{31}FN_2O_5$

<i>Recommended International Nonproprietary Name (Latin, English)</i>	<i>Chemical Name or Description and Molecular Formula</i>
sapropterinum sapropterin	( <i>–</i> )( <i>6R</i> )-2-amino-6-[( <i>1R,2S</i> )-1,2-dihydroxypropyl]-5,6,7,8-tetrahydro-4( <i>3H</i> )-pteridinone $C_9H_{15}N_5O_3$
sarpogrelatum sarpogrelate	( $\pm$ )-2-(dimethylamino)-1-[[ $\alpha$ -( <i>m</i> -methoxyphenethyl)phenoxy]methyl]ethyl hydrogen succinate $C_{24}H_{31}NO_6$
semotiadiolum semotiadil	( <i>+</i> )-( <i>R</i> )-2-[5-methoxy-2-[3-[methyl[2-[3,4-methylenedioxy)phenoxy]ethyl]amino]propoxy]phenyl]-4-methyl-2 <i>H</i> -1,4-benzothiazin-3( <i>4H</i> )-one $C_{29}H_{32}N_2O_6S$
serazapinum serazapine	methyl ( $\pm$ )-1,3,4,16 <i>b</i> -tetrahydro-2-methyl-2 <i>H</i> ,10 <i>H</i> -indolo[2,1- <i>c</i> ]pyrazino-[1,2- <i>a</i> ][1,4]benzodiazepine-16-carboxylate $C_{22}H_{23}N_3O_2$
siltenzepinum siltenzepine	5-[ <i>N,N</i> -bis(2-hydroxyethyl)glycyl]-8-chloro-5,10-dihydro-11 <i>H</i> -dibenzo[ <i>b,e</i> ][1,4]diazepin-11-one $C_{19}H_{20}ClN_3O_4$
somagrebovum somagrebove	1-[ <i>N</i> <sup>2</sup> -( <i>N</i> -L-methionyl-L- $\alpha$ -aspartyl)-L-glutamine]growth hormone (ox reduced) $C_{987}H_{1534}N_{265}O_{288}S_9$
somavubovum somavubove	127-L-leucinegrowth hormone (ox) $C_{976}H_{1533}N_{265}O_{288}S_9$
sorivudinum sorivudine	( <i>+</i> )-1- $\beta$ -D-arabinofuranosyl-5-[( <i>E</i> )-2-bromovinyl]uracil $C_{11}H_{13}BrN_2O_6$
sparfloxacinum sparfloxacin	5-amino-1-cyclopropyl-7-( <i>cis</i> -3,5-dimethyl-1-piperazinyl)-6,8-difluoro-1,4-dihydro-4-oxo-3-quinolinecarboxylic acid $C_{19}H_{22}F_2N_4O_3$
spiriprostilum spiriprostil	( $\pm$ )-(5 <i>R</i> <sup>*,6<i>S</i><sup>*,7<i>R</i><sup>*</sup>)-7-hexyl-2,4-dioxo-1,3-diazaspiro[4,4]nonane-6-heptanoic acid <math>C_{20}H_{34}N_2O_4</math></sup></sup>
sucrosofatum sucrosofate	sucrose octakis(hydrogen sulfate) $C_{12}H_{22}O_{35}S_8$
sulazurilum sulazuril	2-[3,5-dichloro-4-[ <i>p</i> -(methylsulfonyl)phenoxy]phenyl]dihydro-1-methyl-as-triazine-3,5(2 <i>H,4H</i> )-dione $C_{17}H_{15}Cl_2N_3O_5S$
suleparoidum natricum suleparoid sodium	heparitin sulfate, sodium salt ( $C_{14}H_{16}NO_{17}S_2Na_3$ ) <sub>n</sub>
sulofenurum sulofenur	1-( <i>p</i> -chlorophenyl)-3-(5-indanyl(sulfonyl)urea $C_{16}H_{15}ClN_2O_3S$

*Recommended International  
Nonproprietary Name  
(Latin, English)*

*Chemical Name or Description and Molecular Formula*

sulukastum sulukast	3-[[(1 <i>R</i> ,2 <i>E</i> ,4 <i>Z</i> )-1-[( <i>αS</i> )- <i>α</i> -hydroxy- <i>m</i> -1 <i>H</i> -tetrazol-5-yl]benzyl]-2,4-tetradecadienyl]thio]propionic acid <chem>C25H36N4O3S</chem>
sumarotenum sumarotene	1,2,3,4-tetrahydro-1,1,4,4-tetramethyl-6-[( <i>E</i> )- <i>α</i> -methyl- <i>p</i> -(methylsulfonyl)-styryl]naphthalene <chem>C24H30O2S</chem>
suplatastum tosilas suplatast tosilate	( $\pm$ )-[2-[[ <i>p</i> -(3-ethoxy-2-hydroxypropoxy)phenyl]carbamoyl]ethyl]-dimethylsulfonium <i>p</i> -toluenesulfonate <chem>C23H33NO7S2</chem>
tamsulosinum tamsulosin	( $-$ )( <i>R</i> )-5-[2-[[2-( <i>o</i> -ethoxyphenoxy)ethyl]amino]propyl]-2-methoxybenzenesulfonamide <chem>C20H28N2O5S</chem>
taurosteinum urosteine	<i>N</i> -2-thenoyltaurine <chem>C7H9NO4S2</chem>
tebufelonum - tebufelone	3',5'-di- <i>tert</i> -butyl-4'-hydroxy-5-hexynophenone <chem>C26H40O2</chem>
technetii ( $^{99m}$ Tc) bicisas technetium ( $^{99m}$ Tc) bicisate	[ <i>N,N'</i> -ethylenedi- <i>L</i> -cysteinato(3-)]oxo [ $^{99m}$ Tc] technetium(V), diethyl ester <chem>C12H21N2O5S2^{99m}Tc</chem>
technetium ( $^{99m}$ Tc) siboroximum technetium ( $^{99m}$ Tc) siboroxime	[bis[(2,3-butanedione dioximato)(1-) <i>O</i> ][(2,3-butanedione dioximato)(2-) <i>O</i> ]isobutylborato(2-)- <i>N,N',N'',N''',N''''</i> , <i>N'''''</i> chloro [ $^{99m}$ Tc]technetium(III) <chem>C16H29BCIN6O6^{99m}Tc</chem>
telmesteinum telmesteine	( $-$ )-3-ethyl hydrogen ( <i>R</i> )-3,4-thiazolidinedicarboxylate <chem>C7H11NO4S</chem>
teludipinum teludipine	( $\pm$ )-4-[ <i>α</i> -[( <i>E</i> )-2-carboxyvinyl]phenyl]-2-[(dimethylamino)methyl]-1,4-dihydro-6-methyl-3,5-pyridinedicarboxylic acid, 4- <i>tert</i> -butyl diethyl ester <chem>C28H38N2O6</chem>
matropii metilsulfas matropium metilsulfate	3 <i>α</i> -hydroxy-8-methyl-1 <i>α</i> H,5 <i>α</i> H-tropanium methyl sulfate (salt), ( $\pm$ )-ethyl hydrogen phenylmalonate <chem>C21H31NO5S</chem>
temocaprilum temocapril	( $+$ )-(2 <i>S</i> ,6 <i>R</i> )-6-[( <i>1S</i> )-1-carboxy-3-phenylpropyl]amino]tetrahydro-5-oxo-2-(2-thienyl)-1,4-thiazepine-4( <i>5H</i> )-acetic acid, 6-ethyl ester <chem>C23H28N2O5S2</chem>
tenosalum tenosal	2-thiophenecarboxylic acid, ester with salicylic acid <chem>C12H10O4S</chem>
tenosiprolum tenosiprol	( <i>R</i> )-4-hydroxy-L-proline 2-thiophenecarboxylate (ester) <chem>C10H11NO4S</chem>

<i>Recommended International Nonproprietary Name (Latin, English)</i>	<i>Chemical Name or Description and Molecular Formula</i>
terbequinilum terbequinil	1,4-dihydro-1-(methoxymethyl)-4-oxo-N-propyl-3-quinolinecarboxamide $C_{15}H_{18}N_2O_3$
terikalantum terikalant	( <i>-</i> )-1-[2-(4-chromanyl)ethyl]-4-(3,4-dimethoxyphenyl)piperidine $C_{24}H_{31}NO_3$
tiagabinum tiagabine	( <i>-</i> )( <i>R</i> )-1-[4,4-bis(3-methyl-2-thienyl)-3-butenyl]nipecotic acid $C_{20}H_{25}NO_2S_2$
tibeglisenum tibeglisene	( $\pm$ )-5-( <i>p</i> -chlorophenyl)-2-( <i>p</i> -tolylsulfonyl)-4-pentynoic acid $C_{18}H_{15}ClO_4S$
tirilazadum tirilazad	21-[4-(2,6-di-1-pyrrolidinyl-4-pyrimidinyl)-1-piperazinyl]-16 <i>a</i> -methylpregna-1,4,9(11)-triene-3,20-dione $C_{38}H_{52}N_6O_2$
tulopafantum tulopafant	( <i>+</i> )-3'-benzoyl-3-(3-pyridyl)-1 <i>H</i> ,3 <i>H</i> -pyrrolo[1,2- <i>c</i> ]thiazole-7-carboxanilide $C_{25}H_{19}N_3O_2S$
utibaprilum utibapril	( <i>S</i> )-2- <i>tert</i> -butyl-4-[( <i>S</i> )- <i>N</i> -[( <i>S</i> )-1-carboxy-3-phenylpropyl]alanyl]-4 <i>z</i> -1,3,4-thiadiazoline-5-carboxylic acid, 4-ethyl ester $C_{22}H_{31}N_3O_5S$
vamicamidum vamicamide	( $\pm$ )-( <i>R</i> *)- $\alpha$ -[( <i>R</i> *)-2-(dimethylamino)propyl]- $\alpha$ -phenyl-2-pyridineacetamide $C_{18}H_{23}N_3O$
vanoxerinum vanoxerine	1-[2-[bis( <i>p</i> -fluorophenyl)methoxy]ethyl]-4-(3-phenylpropyl)piperazine $C_{28}H_{32}F_2N_2O$
vinfosiltinum vinfosiltine	[23( <i>S</i> )]-4-deacetyl-3-de(methoxycarbonyl)-3-[(2-methyl-1-phosphonopropyl)carbamoyl]vincaleukoblastine, diethyl ester $C_{51}H_{72}N_5O_{10}P$
vinleucinolum vinleucinol	[23(1 <i>S</i> ,2 <i>S</i> )]-4-deacetyl-3-[(1-carboxy-2-methylbutyl)carbamoyl]-3-de(methoxycarbonyl)vincaleukoblastine, ethyl ester $C_{51}H_{69}N_5O_3$
vorozolum vorazole	( <i>+</i> )-6-( <i>p</i> -chloro- $\alpha$ -1 <i>H</i> -1,2,4-triazol-1-ylbenzyl)-1-methyl-1 <i>H</i> -benzotriazole $C_{16}H_{13}ClN_6$
zabiciprilatum zabiciprilat	( <i>S</i> )-2-[( <i>S</i> )- <i>N</i> -[( <i>S</i> )-1-carboxy-3-phenylpropyl]alanyl]-2-azabicyclo[2.2.2]octane-3-carboxylic acid $C_{21}H_{28}N_2O_5$
zalospironum zalospirone	(1 <i>R</i> *,2 <i>R</i> *,5 <i>S</i> *,6 <i>S</i> *,7 <i>S</i> *,8 <i>R</i> *)- <i>N</i> -[4-[4-(2-pyrimidinyl)-1-piperazinyl]butyl]-tricyclo[4.2.2.O <sup>2,6</sup> ]deca-3,9-diene-7,8-dicarboximide $C_{24}H_{29}N_4O_2$

<i>Recommended International Nonproprietary Name (Latin, English)</i>	<i>Chemical Name or Description and Molecular Formula</i>
zaltoprofenum zaltoprofen	( $\pm$ )-10,11-dihydro- $\alpha$ -methyl-10-oxodibenzo[ <i>b,f</i> ]thiepin-2-acetic acid $C_{17}H_{14}O_3S$
zatosetronum zatosetron	5-chloro-2,3-dihydro-2,2-dimethyl- $N$ -1 <i>aH</i> ,5 <i>aH</i> -tropan-3 <i>a</i> -yl-7-benzofuran-carboxamide $C_{19}H_{25}ClN_2O_2$
zenarestatum zenarestat	3-(4-bromo-2-fluorobenzyl)-7-chloro-3,4-dihydro-2,4-dioxo-1(2 <i>H</i> )-quinazolineacetic acid $C_{17}H_{11}BrClFN_2O_4$
zeniplatinum zeniplatin	<i>cis</i> -[2,2-bis(aminomethyl)-1,3-propanediol](1,1-cyclobutane-dicarboxylato)platinum $C_{11}H_{20}N_2O_6Pt$
zilascorbum ( $^2H$ ) zilascorb ( $^2H$ )	5,6- <i>O</i> -[( <i>RS</i> )-benzylidene- $\alpha$ - <i>d</i> ]-L-ascorbic acid $C_{13}H_{11}DO_6$
zileutonum zileuton	( $\pm$ )-1-(1-benzo[ <i>b</i> ]thien-2-ylethyl)-1-hydroxyurea $C_{11}H_{12}N_2O_2S$
zofenoprilatum zofenoprilat	(4 <i>S</i> )-1-[( <i>S</i> )-3-mercaptop-2-methylpropionyl]-4-(phenylthio)-L-proline $C_{15}H_{18}NO_3S_2$
zopolrestatum zopolrestat	3,4-dihydro-4-oxo-3-[[5-(trifluoromethyl)-2-benzothiazolyl]methyl]-1-phthalazineacetic acid $C_{19}H_{12}F_3N_3O_3S$

## AMENDMENTS TO PREVIOUS LISTS

WHO Chronicle, Vol. 19, No. 4, 5 and 6, 1965

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

- p. 9 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. 35, No. 5, 1981

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

- p. 2 amifostinum  
amifostine *replace the chemical name and the molecular formula by the following:*  
S-[2-[(3-aminopropyl)amino]ethyl] dihydrogen phosphorothioate  
C5H15N2O3PS
- p. 6 loprazolamum  
loprazolam *replace the chmical name by the following:*  
(Z)-6-(o-chlorophenyl)-2,4-dihydro-2-[(4-methyl-1-piperazinyl)methylene]-8-nitro-1H-imidazo[1,2-a][1,4]benzodiazepin-1-one

Supplement to WHO Chronicle, Vol. 39, No. 5, 1985

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

- p. 5 efrotomycinum  
efrotomycin *replace the chemical name by the following:*  
an antibiotic produced by *Streptomyces lactamdurans*  
efrotomycin A, or  
(\alpha S,2R,3R,4R,6S)-4-[[6-deoxy-4-O-(6-deoxy-2,4-di-O-methyl-\alpha-L-mannopyranosyl)-3-O-methyl-\beta-D-allopyranosyl]oxy]-N-[(2E,4E,6S,7R)-7-[(2S,3S,4R,5R)-5-[(1E,3E,5E)-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]-\alpha-ethyltetrahydro-2,3-dihydroxy-5,5-dimethyl-6-[(1E,3Z)-1,3-pentadienyl]-2H-pyran-2-acetamide
- p. 6 enoxaparinum  
enoxaparin *delete the whole entry*
- insert*  
enoxaparinum natricum  
enoxaparin sodium *insert*  
Sodium salt of depolymerized heparin obtained by alcaline degradation of heparin benzyl ester from pork intestinal mucosa; the majority of the components present a 2-O-sulfo-4-enopyranosuronic acid structure at the non-reducing end and a 2-N,6-O-disulfo-\alpha-glucosamine structure at the reducing end of their chain; the average relative molecular mass is about 4500, ranging between 3500 and 5500; the degree of sulfatation is about 2 per disaccharidic unit.

Supplement to WHO Chronicle, Vol. 40, No. 6, 1986

### Recommended International Nonproprietary Names (Rec. INN): List 26

- p. 4 epalrestatum  
epalrestat *replace the chmical name by the following:*  
5-[(Z,E)-\beta-methylcinnamylidene]-4-oxo-2-thioxo-3-thiazolidineacetic acid

WHO Drug Information, Vol. 2, No. 3, 1988

**Recommended International Nonproprietary Names (Rec. INN): List 28**

- |      |                                     |   |
|------|-------------------------------------|---|
| p. 3 | <i>delete</i>                       | <i>insert</i>   |
|      | levdropropizinum<br>levdropropizine | levodropropizinum<br>levodropropizine   |
| p. 4 | pemedolacum<br>pemedolac            | <i>replace the chemical name by the following:</i><br>$(\pm)$ - <i>cis</i> -4-benzyl-1-ethyl-1,3,4-9-tetrahydropyrano[3,4- <i>b</i> ]indole-1-acetic acid |

WHO Drug Information, Vol. 3, No. 3, 1989

**Recommended International Nonproprietary Names (Rec. INN): List 29**

- |      |                          |  |
|------|--------------------------|--|
| p. 1 | acemannanum<br>acemannan | <i>replace the description by the following:</i><br>Acemannan is a highly acetylated, polydispersed, linear mannan obtained from the mucilage of <i>Aloe barbadensis</i> , Miller (aloe vera).   |
| p. 2 | beraprostum<br>beraprost | <i>replace the chemical name by the following:</i><br>$(\pm)$ -(1 <i>R</i> ,2 <i>R</i> ,3 <i>aS</i> ,8 <i>bS</i> )-2,3,3 <i>a</i> ,8 <i>b</i> -tetrahydro-2-hydroxy-1-[ <i>(E)</i> -(3 <i>S</i> ,4 <i>RS</i> )-3-hydroxy-4-methyl-1-octen-6-ynyl]-1 <i>H</i> -cyclopenta[ <i>b</i> ]benzofuran-5-butrylic acid |

WHO Drug Information, Vol. 4, No. 3, 1990

**Recommended International Nonproprietary Names (Rec. INN): List 30**

- |      |                            |  |
|------|----------------------------|--|
| p. 6 | fosquidonum<br>fosquidone  | <i>replace the chemical name by the following:</i><br>benzyl $(\pm)$ -5,8,13,14-tetrahydro-14-methyl-8,13-dioxobenz[5,6]isoindolo-[2,1- <i>b</i> ]isoquinolin-9-yl hydrogen phosphate                            |
| p. 8 | moxidectinum<br>moxidectin | <i>replace the chemical name by the following:</i><br>$(6R,25S)$ -5- <i>O</i> -demethyl-28-deoxy-25-[ <i>(E)</i> -1,3-dimethyl-1-butenyl]-6,28-epoxy-23-oxomilbemycin B 23- <i>(E)</i> -( <i>O</i> -methyloxime) |