International Nonproprietary Names for Pharmaceutical Substances

Notice is hereby given that, in accordance with paragraph 7 of the Procedure for the Selection of Recommended International Nonproprietary Names for Pharmaceutical Substances*, the following names are sele cted 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 32

Lists of proposed (1–65) and recommended (1–31) international nonproprietary names can be found in Cumulative List No. 8, 1992.

Recommended International Nonproprietary Name (Latin, English)	*Chemical Name or Description and Molecular Formula*
acidum aceneuramicum aceneuramic acid	(–)-5-acetamido-3,5-dideoxy-D-*glycero*-D-*galacto*-nonulosonic acid $C_{11}H_{19}NO_9$
adapalenum adapalene	6-[3-(1-adamantyl)-4-methoxyphenyl]-2-naphthoic acid $C_{28}H_{28}O_3$
albifyllinum albifylline	1-(5-hydroxy-5-methylhexyl)-3-methylxanthine $C_{13}H_{20}N_4O_3$
alosetronum alosetron	2,3,4,5-tetrahydro-5-methyl-2-[(5-methylimidazol-4-yl)methyl]-1*H*-pyrido[4,3-*b*]indol-1-one $C_{17}H_{18}N_4O$
amrubicinum amrubicin	(+)-(7*S*,9*S*)-9-acetyl-9-amino-7-[(2-deoxy-β-D-*erythro*-pentopyranosyl)oxy]-7,8,9,10-tetrahydro-6,11-dihydroxy-5,12-naphthacenedione $C_{25}H_{25}NO_9$
amtolmetinum guacilum amtolmetin guacil	*N*-[(1-methyl-5-*p*-toluoylpyrrol-2-yl)acetyl]glycine *o*-methoxyphenyl ester $C_{24}H_{24}N_2O_5$
araprofenum araprofen	(±)-*p*-(*o*-carboxyanilino)hydratropic acid $C_{16}H_{15}NO_4$
atenololum atenolol	2-[*p*-[2-hydroxy-3-(isopropylamino)propoxy]phenyl]acetamide $C_{14}H_{22}N_2O_3$

* *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*
atovaquonum atovaquone	2-[*trans*-4-(*p*-chlorophenyl)cyclohexyl]-3-hydroxy-1,4-naphthoquinone $C_{22}H_{19}ClO_3$
batebulastum batebulast	*p*-*tert*-butylphenyl *trans*-4-(guanidinomethyl)cyclohexanecarboxylate $C_{19}H_{29}N_3O_2$
becliconazolum becliconazole	(±)-1-[*o*-chloro-α-(5-chloro-2-benzofuranyl)benzyl]imidazole $C_{18}H_{12}Cl_2N_2O$
befloxatonum befloxatone	(*R*)-5-(methoxymethyl)-3-[*p*-[(*R*)-4,4,4-trifluoro-3-hydroxybutoxy]phenyl]-2-oxazolidinone $C_{15}H_{18}F_3NO_5$
biciromabum biciromab	mouse T2G1s cell anti-human fibrin II β-chain monoclonal immunoglobulin G Fab' fragment
binospironum binospirone	(±)-*N*-[2-[(1,4-benzodioxan-2-ylmethyl)amino]ethyl]-1,1-cyclopentanediacetimide $C_{20}H_{28}N_2O_4$
brimonidinum brimonidine	5-bromo-6-(2-imidazolidinylidenamino)quinoxaline $C_{11}H_{10}BrN_5$
calcii levofolinas calcium levofolinate	calcium *N*-[*p*-[[[(6*S*)-2-amino-5-formyl-1,4,5,6,7,8-hexahydro-4-oxo-6-pteridinyl]methyl]amino]benzoyl]-L-glutamate (1:1) $C_{20}H_{21}CaN_7O_7$
calteridolum calteridol	hydrogen [(±)-10-(2-hydroxypropyl)-1,4,7,10-tetraazacyclododecane-1,4,7-triacetato(3-)]calciate(1-) $C_{17}H_{30}CaN_4O_7$
casokefamidum casokefamide	L-tyrosyl-D-alanyl-L-phenylalanyl-D-alanyl-L-tyrosinamide $C_{33}H_{40}N_6O_7$
cebaracetamum cebaracetam	(±)-4-[[4-(*p*-chlorophenyl)-2-oxo-1-pyrrolidinyl]acetyl]-2-piperazinone $C_{16}H_{18}ClN_3O_3$
cefditorenum cefditoren	(+)-(6*R*,7*R*)-7-[2-(2-amino-4-thiazolyl)glyoxylamido]-3-[(*Z*)-2-(4-methyl-5-thiazolyl)vinyl]-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7²-(*Z*)-(*O*-methyloxime) $C_{19}H_{18}N_6O_5S_3$
cefozopranum cefozopran	(–)-1-[[(6*R*,7*R*)-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]-1*H*-imidazo[1,2-*b*]pyridazin-4-ium hydroxide inner salt, 7²-(*Z*)-(*O*-methyloxime) $C_{19}H_{17}N_9O_5S_2$

Recommended International Nonproprietary Name (Latin, English)	*Chemical Name or Description and Molecular Formula*
celmoleukinum celmoleukin	interleukin 2 (human clone pTIL2-21a, protein moiety) $C_{693}H_{1118}N_{178}O_{203}S_7$
cilnidipinum cilnidipine	(±)-(*E*)-cinnamyl 2-methoxyethyl 1,4-dihydro-2,6-dimethyl-4-(*m*-nitrophenyl)-3,5-pyridinedicarboxylate $C_{27}H_{28}N_2O_7$
cioteronelum cioteronel	(±)-hexahydro-4-(5-methoxyheptyl)-2(1*H*)-pentalenone $C_{16}H_{28}O_2$
dapoxetinum dapoxetine	(+)-(*S*)-*N*,*N*-dimethyl-α-[2-(1-naphthyloxy)ethyl]benzylamine $C_{21}H_{23}NO$
deramciclanum deramciclane	*N*,*N*-dimethyl-2-[[(1*R*,2*S*,4*R*)-2-phenyl-2-bornyl]oxy]ethylamine $C_{20}H_{31}NO$
deriglidolum deriglidole	(+)-1,2,4,5-tetrahydro-2-(2-imidazolin-2-yl)-2-propylpyrrolo[3,2,1-*hi*]indole $C_{16}H_{21}N_3$
dexfosfoserinum dexfosfoserine	L-serine dihydrogen phosphate (ester) $C_3H_8NO_6P$
dexloxiglumidum dexloxiglumide	(*R*)-4-(3,4-dichlorobenzamido)-*N*-(3-methoxypropyl)-*N*-pentylglutaramic acid $C_{21}H_{30}Cl_2N_2O_5$
dexnafenodonum dexnafenodone	(+)-(*S*)-2-[2-(dimethylamino)ethyl]-3,4-dihydro-2-phenyl-1(2*H*)-naphthalenone $C_{20}H_{23}NO$
dexverapamilum dexverapamil	(+)-(*R*)-5-[(3,4-dimethoxyphenethyl)methylamino]-2-(3,4-dimethoxyphenyl)-2-isopropylvaleronitrile $C_{27}H_{38}N_2O_4$
dolasetronum dolasetron	indole-3-carboxylic acid, ester with (8*r*)-hexahydro-8-hydroxy-2,6-methano-2*H*-quinolizin-3(4*H*)-one $C_{19}H_{20}N_2O_3$
dorlimomab aritoxum dorlimomab aritox	ricin A chain-antibody ST 1 F(ab′)2 fragment immunotoxin
efonidipinum efonidipine	2-(*N*-benzylanilino)ethyl (±)-1,4-dihydro-2,6-dimethyl-4-(*m*-nitrophenyl)-5-phosphononicontinate, cyclic 2,2-dimethyltrimethylene ester $C_{34}H_{36}N_3O_7P$
egualenum egualen	3-ethyl-7-isopropyl-1-azulenesulfonic acid $C_{15}H_{18}O_3S$

Recommended International Nonproprietary Name (Latin, English)	*Chemical Name or Description and Molecular Formula*
eliprodilum eliprodil	(±)-α-(*p*-chlorophenyl)-4-(*p*-fluorobenzyl)-1-piperidineethanol $C_{20}H_{23}ClFNO$
eltanolonum eltanolone	3α-hydroxy-5β-pregnan-20-one $C_{21}H_{34}O_2$
emakalimum emakalim	(–)-(3*S*,4*R*)-3-hydroxy-2,2-dimethyl-4-(2-oxo-1(2*H*)-pyridyl)-6-chromancarbonitrile $C_{17}H_{16}N_2O_3$
emitefurum emitefur	*m*-[[3-(ethoxymethyl)-5-fluoro-3,6-dihydro-2,6-dioxo-1(2*H*)-pyrimidinyl]-carbonyl]benzoic acid, 2-ester with 2,6-dihydroxynicotinonitrile, benzoate (ester) $C_{28}H_{19}FN_4O_8$
entacaponum entacapone	(*E*)-α-cyano-*N*,*N*-diethyl-3,4-dihydroxy-5-nitrocinnamamide $C_{14}H_{15}N_3O_5$
ersoferminum ersofermin	*N*-(*N*-glycyl-L-threonyl)basic fibroblast growth factor (human clone λKB7/λHFL1 precursor reduced) $C_{775}H_{1220}N_{220}O_{223}S_7$
espatropatum espatropate	(*R*)-3-quinuclidinyl (*R*)-α-(hydroxymethyl)-α-phenylimidazole-1-acetate $C_{19}H_{23}N_3O_3$
etonogestrelum etonogestrel	13-ethyl-17-hydroxy-11-methylene-18,19-dinor-17α-pregn-4-en-20-yn-3-one $C_{22}H_{28}O_2$
exemestanum exemestane	6-methyleneandrosta-1,4-diene-3,17-dione $C_{20}H_{24}O_2$
fluazuronum fluazuron	1-[4-chloro-3-[[3-chloro-5-(trifluoromethyl)-2-pyridyl]oxy]phenyl]-3-(2,6-difluorobenzoyl)urea $C_{20}H_{10}Cl_2F_5N_3O_3$
formestanum formestane	4-hydroxyandrost-4-ene-3,17-dione $C_{19}H_{26}O_3$
gadobutrolum gadobutrol	[10-[(1*RS*,2*SR*)-2,3-dihydroxy-1-(hydroxymethyl)propyl]-1,4,7,10-tetra=azacyclododecane-1,4,7-triacetato(3-)]gadolinium $C_{18}H_{31}GdN_4O_9$
galocitabinum galocitabine	*N*-[1-(5-deoxy-β-D-ribofuranosyl)-5-fluoro-1,2-dihydro-2-oxo-4-pyrimidinyl]-3,4,5-trimethoxybenzamide $C_{19}H_{22}FN_3O_8$
ganirelixum ganirelix	*N*-acetyl-3-(2-naphthyl)-D-alanyl-*p*-chloro-D-phenylalanyl-3-(3-pyridyl)-D-alanyl-L-seryl-L-tyrosyl-N^6-(*N*,*N*′-diethylamidino)-D-lysyl-L-leucyl-N^6-(*N*,*N*′-diethylamidino)-L-lysyl-L-prolyl-D-alaninamide $C_{80}H_{113}ClN_{18}O_{13}$

Recommended International Nonproprietary Name (Latin, English)	*Chemical Name or Description and Molecular Formula*
idraprilum idrapril	(1*S*,2*R*)-2-[[(hydroxycarbamoyl)methyl]methylcarbamoyl]cyclohexane-carboxylic acid $C_{11}H_{18}N_2O_5$
ilatreotidum ilatreotide	*N*-(1-deoxy-4-*O*-α-D-glucopyranosyl-D-fructopyranos-1-yl)-D-phenylalanyl-L-cysteinyl-L-phenylalanyl-D-tryptophyl-L-lysyl-L-threonyl-*N*-[(1*R*,2*R*)-2-hydroxy-1-(hydroxymethyl)propyl]-L-cysteinamide cyclic (2→7)-disulfide $C_{61}H_{86}N_{10}O_{20}S_2$
imciromabum imciromab	mouse R11D10 cell monoclonal κ-chain containing immunoglobulin G2a, anti-human cardiac myosin heavy chain
imiquimodum imiquimod	4-amino-1-isobutyl-1*H*-imidazo[4,5-*c*]quinoline $C_{14}H_{16}N_4$
iomazenilum (^{123}I) iomazenil (^{123}I)	ethyl 5,6-dihydro-7-iodo-^{123}I-5-methyl-6-oxo-4*H*-imidazo[1,5-a][1,4]benzodiazepine-3-carboxylate $C_{15}H_{14}{}^{123}IN_3O_3$
isomolpanum isomolpan	(±)-*trans*-1,3,4,4a,5,10b-hexahydro-4-propyl-2*H*-[1]benzopyrano[3,4-*b*]pyridin-9-ol $C_{15}H_{21}NO_2$
itopridum itopride	*N*-[*p*-[2-(dimethylamino)ethoxy]benzyl]veratramide $C_{20}H_{26}N_2O_4$
ketaminum ketamine	2-(*o*-chlorophenyl)-2-(methylamino)cyclohexanone $C_{13}H_{16}ClNO$
lamivudinum lamivudine	(–)-1-[(2*R*,5*S*)-2-(hydroxymethyl)-1,3-oxathiolan-5-yl]cytosine $C_8H_{11}N_3O_3S$
lanoconazolum lanoconazole	(±)-α-[(*E*)-4-(*o*-chlorophenyl)-1,3-dithiolan-2-ylidene]imidazole-1-acetonitrile $C_{14}H_{10}ClN_3S_2$
lazabemidum lazabemide	*N*-(2-aminoethyl)-5-chloropicolinamide $C_8H_{10}ClN_3O$
lesopitronum lesopitron	2-[4-[4-(4-chloropyrazol-1-yl)butyl]-1-piperazinyl]pyrimidine $C_{15}H_{21}ClN_6$
levcromakalimum levcromakalim	(3*S*,4*R*)-3-hydroxy-2,2-dimethyl-4-(2-oxo-1-pyrrolidinyl)-6-chromancarbonitrile $C_{16}H_{18}N_2O_3$
levcycloserinum levcycloserine	(*S*)-4-amino-3-isoxazolidinone $C_3H_6N_2O_2$
levdobutaminum levdobutamine	4-[2-[[(*S*)-3-(*p*-hydroxyphenyl)-1-methylpropyl]amino]ethyl]pyrocatechol $C_{18}H_{23}NO_3$

Recommended International Nonproprietary Name (Latin, English)	*Chemical Name or Description and Molecular Formula*
lexithromycinum lexithromycin	erythromycin 9-(*O*-methyloxime) $C_{38}H_{70}N_2O_{13}$
lifarizinum lifarizine	1-(diphenylmethyl)-4-[(5-methyl-2-*p*-tolylimidazol-4-yl)methyl]piperazine $C_{29}H_{32}N_4$
linarotenum linarotene	5′,6′,7′,8′-tetrahydro-5′,5′,8′,8′-tetramethyl-2′-acetonaphthone (*E*)-[*p*-(methylsulfonyl)phenyl]hydrazone $C_{23}H_{30}N_2O_2S$
lintopridum lintopride	4-amino-5-chloro-*N*-[(1-ethyl-2-imidazolin-2-yl)methyl]-*o*-anisamide $C_{14}H_{19}ClN_4O_2$
lobaplatinum lobaplatin	*cis*-[*trans*-1,2-cyclobutanebis(methylamine)][(*S*)-lactato-O^1,O^1]platinum $C_9H_{18}N_2O_3Pt$
losartanum losartan	2-butyl-4-chloro-1-[*p*-(*o*-1*H*-tetrazol-5-ylphenyl)benzyl]imidazole-5-methanol $C_{22}H_{23}ClN_6O$
lufenuronum lufenuron	1-[2,5-dichloro-4-(1,1,2,3,3,3-hexafluoropropoxy)phenyl]-3-(2,6-difluorobenzoyl)urea $C_{17}H_8Cl_2F_8N_2O_3$
marbofloxacinum marbofloxacin	9-fluoro-2,3-dihydro-3-methyl-10-(4-methyl-1-piperazinyl)-7-oxo-7*H*-pyrido[3,2,1-*ij*][4,1,2]benzoxadiazine-6-carboxylic acid $C_{17}H_{19}FN_4O_4$
maslimomabum maslimomab	mouse monoclonal immunoglobulin G2b, anti-human T-cell receptor α/β chain
mecaserminum mecasermin	insulin-like growth factor I (human) $C_{331}H_{512}N_{94}O_{101}S_7$
miboplatinum miboplatin	(−)-*cis*-[(*R*)-2-(aminomethyl)pyrrolidine](1,1-cyclobutanedicarboxylato)-platinum $C_{11}H_{18}N_2O_4Pt$
mirimostimum mirimostim	1-214-colony-stimulating factor 1 (human clone p3ACSF-69 protein moiety reduced), homodimer $C_{1058}H_{1651}N_{277}O_{341}S_{14}$ *(for non-glycosylated protein)*
modipafantum modipafant	ethyl (+)-(*R*)-4-(*o*-chlorophenyl)-1,4-dihydro-6-methyl-2-[*p*-(2-methyl-1*H*-imidazo[4.5-*c*]pyridin-1-yl)phenyl]-5-(2-pyridylcarbamoyl)nicotinate $C_{34}H_{29}ClN_6O_3$
mosapridum mosapride	(±)-4-amino-5-chloro-2-ethoxy-*N*-[[4-(*p*-fluorobenzyl)-2-morpholinyl]-methyl]benzamide $C_{21}H_{25}ClFN_3O_3$

Recommended International Nonproprietary Name (Latin, English)	*Chemical Name or Description and Molecular Formula*
nafamostatum nafamostat	6-amidino-2-naphthyl *p*-guanidinobenzoate *or* *p*-guanidinobenzoic acid, ester with 6-hydroxy-2-naphthamidine $C_{19}H_{17}N_5O_2$
naglivanum naglivan	bis[2-amino-3-mercapto-*N*-octylpropionamidato(1-)-*S*]oxovanadium $C_{22}H_{46}N_4O_3S_2V$
nartograstimum nartograstim	*N*-L-methionyl-1-L-alanine-3-L-threonine-4-L-tyrosine-5-L-arginine-17-L-serine = colony-stimulating factor (human clone 1034) $C_{850}H_{1344}N_{226}O_{245}S_8$ *(for non-glycosylated protein)*
nebacumabum nebacumab	immunoglobulin M (human monoclonal HA-1A anti-endotoxin), disulfide with human monoclonal HA-1A κ-chain, pentameric dimer
necopidemum ecopidem	*N*-[[2-(*p*-ethylphenyl)-6-methylimidazo[1,2-*a*]pyridin-3-yl]methyl]-*N*,3-dimethylbutyramide $C_{23}H_{29}N_3O$
nefiracetamum nefiracetam	2-oxo-1-pyrrolidineaceto-2′,6′-xylidide $C_{14}H_{18}N_2O_2$
nevirapinum nevirapine	11-cyclopropyl-5,11-dihydro-4-methyl-6*H*-dipyrido[3,2-*b*:2′,3′-*e*][1,4]diazepin-6-one $C_{15}H_{14}N_4O$
orlistatum orlistat	*N*-formyl-L-leucine, ester with (3*S*,4*S*)-3-hexyl-4-[(2*S*)-2-hydroxytridecyl]-2-oxetanone $C_{29}H_{53}NO_5$
panadiplonum panadiplon	3-(5-cyclopropyl-1,2,4-oxadiazol-3-yl)-5-isopropylimidazo[1,5-*a*]quinoxalin-4(5*H*)-one $C_{18}H_{17}N_5O_2$
parcetasalum parcetasal	(±)-4′-[(2-methyl-4-oxo-1,3-benzodioxan-2-yl)oxy]acetanilide $C_{17}H_{15}NO_5$
pentetreotidum pentetreotide	*N*-[2-[[2-[bis(carboxymethyl)amino]ethyl](carboxymethyl)amino]ethyl]-*N*-(carboxymethyl)glycyl-D-phenylalanyl-L-cysteinyl-L-phenylalanyl-D-tryptophyl-L-lysyl-L-threonyl-*N*-[(1*R*,2*R*)-2-hydroxy-1-(hydroxymethyl)propyl]-L-cysteinamide cyclic (3→8)-disulfide $C_{63}H_{87}N_{13}O_{19}S_2$
perflubronum perflubron	1-bromoheptadecafluorooctane C_8BrF_{17}
perfosfamidum perfosfamide	(±)-*cis*-2-[bis(2-chloroethyl)amino]tetrahydro-2*H*-1,3,2-oxazaphosphorin-4-yl hydroperoxide, *P*-oxide $C_7H_{15}Cl_2N_2O_4P$

Recommended International Nonproprietary Name (Latin, English)	*Chemical Name or Description and Molecular Formula*
pirsidominum pirsidomine	*N*-*p*-anisoyl-3-(*cis*-2,6-dimethylpiperidino)sydnone imine $C_{17}H_{22}N_4O_3$
pivagabinum pivagabine	4-pivalamidobutyric acid $C_9H_{17}NO_3$
plomestanum plomestane	10-(2-propynyl)estr-4-ene-3,17-dione $C_{21}H_{26}O_2$
polaprezincum polaprezinc	*catena*-poly[zinc-μ-[β-alanyl-L-histidinato(2-)-$N,N^{\pi},O:N^{\tau}$]] $(C_9H_{12}N_4O_3Zn)_n$
polifeprosanum polifeprosan	4,4'-(trimethylenedioxy)dibenzoic acid, polymer with sebacic acid *"m" and "n" are the numerical values representing the mass percentages of the monomers. The value of "m" should be given as a figure after the INN, e.g. "polifeprosan 20", which means "m = 20" and "n = 80"* $(C_{17}H_{16}O_6)_m$-$(C_{10}H_{18}O_4)_n$
poliglecapronum poliglecaprone	2-oxepanone polymer with *p*-dioxane-2,5-dione *"m" and "n" are the numerical values representing the mol percentages of the monomers. The value of "m" should be given as a figure after the INN, e.g. "poliglecaprone 90", which means "m = 90" and "n = 10".* $(C_6H_{10}O_2)_m(C_4H_4O_4)_n$
poliglusamum poliglusam	chitosan
pranidipinum pranidipine	(*E*)-cinnamyl methyl (±)-1,4-dihydro-2,6-dimethyl-4-(*m*-nitrophenyl)-3,5-pyridinedicarboxylate $C_{25}H_{24}N_2O_6$
racephedrinum racephedrine	(±)-ephedrine $C_{10}H_{15}NO$
remikirenum remikiren	(*αS*)-α-[(*αS*)-α-[(*tert*-butylsulfonyl)methyl]hydrocinnamamido]-*N*-[(1*S*,2*R*,3*S*)-1-(cyclohexylmethyl)-3-cyclopropyl-2,3-dihydroxypropyl]imidazole-4-propionamide $C_{33}H_{50}N_4O_6S$
remiprostolum remiprostol	(±)-methyl (*Z*)-7-[(1*R*,2*R*,3*R*)-2-[(1*E*,5*E*)-(4*RS*)-6-(1-cyclopenten-1-yl)-4-hydroxy-4-methyl-1,5-hexadienyl]-3-hydroxy-5-oxocyclopentyl]-4-heptenoate $C_{25}H_{36}O_5$
repaglinidum repaglinide	(+)-2-ethoxy-α-[[(*S*)-α-isobutyl-*o*-piperidinobenzyl]carbamoyl]-*p*-toluic acid $C_{27}H_{36}N_2O_4$
rilmakalimum rilmakalim	(+)-1-[(3*S*,4*R*)-3-hydroxy-2,2-dimethyl-6-(phenylsulfonyl)-4-chromanyl]-2-pyrrolidinone $C_{21}H_{23}NO_5S$

Recommended International Nonproprietary Name (Latin, English)	*Chemical Name or Description and Molecular Formula*
rocuronii bromidum rocuronium bromide	1-allyl-1-(3α,17β-dihydroxy-2β-morpholino-5α-androstan-16β-yl)pyrrolidinium bromide, 17-acetate $C_{32}H_{53}BrN_2O_4$
rogletimidum rogletimide	(±)-2-ethyl-2-(4-pyridyl)glutarimide $C_{12}H_{14}N_2O_2$
rolafagrelum rolafagrel	5,6-dihydro-7-imidazol-1-yl-2-naphthoic acid $C_{14}H_{12}N_2O_2$
romergolinum romergoline	4-[(9,10-didehydro-6-methylergolin-8β-yl)methyl]-2,6-piperazinedione $C_{20}H_{22}N_4O_2$
sargramostimum sargramostim	23-L-leucinecolony-stimulating factor 2 (human clone pHG25 protein moiety) $C_{639}H_{1002}N_{168}O_{196}S_8$ *(for non-glycosylated protein)*
seproxetinum seproxetine	(*S*)-3-phenyl-3-[(α,α,α-trifluoro-*p*-tolyl)oxy]propylamine $C_{16}H_{16}F_3NO$
sevirumabum sevirumab	human monoclonal immunoglobulin G1, κ-chain, anti-cytomegavirus
sifaprazinum sifaprazine	1-methyl-4-(α-phenyl-*o*-tolyl)piperazine $C_{18}H_{22}N_2$
silteplasum silteplase	*N*-[N^2-(*N*-glycyl-L-alanyl)-L-arginyl]plasminogen activator (human tissue-type protein moiety reduced), glycoform $C_{2580}H_{3948}N_{732}O_{784}S_{40}$ *(for non-glycosylated protein)*
simendanum simendan	mesoxalonitrile (±)-[*p*-(1,4,5,6-tetrahydro-4-methyl-6-oxo-3-pyridazinyl)phenyl]hydrazone $C_{14}H_{12}N_6O$
somfaseporum somfasepor	8-190 growth hormone (pig) $C_{938}H_{1465}N_{257}O_{274}S_6$
tacalcitolum tacalcitol	(+)-(5*Z*,7*E*,24*R*)-9,10-secocholesta-5,7,10(19)-triene-1α,3β,24-triol $C_{27}H_{44}O_3$
tacrolimusum tacrolimus	(–)-(3*S*,4*R*,5*S*,8*R*,9*E*,12*S*,14*S*,15*R*,16*S*,18*R*,19*R*,26a*S*)-8-allyl-5,6,8,11,12,13,14,15,16,17,18,19,24,25,26,26a-hexadecahydro-5,19-dihydroxy-3-[(*E*)-2-[(1*R*,3*R*,4*R*)-4-hydroxy-3-methoxycyclohexyl]-1-methylvinyl]-14,16-dimethoxy-4,10,12,18-tetramethyl-15,19-epoxy-3*H*-pyrido[2,1-*c*][1,4]oxa=azacyclotricosine-1,7,20,21(4*H*,23*H*)-tetrone $C_{44}H_{69}NO_{12}$
tamolarizinum tamolarizine	(±)-α-(3,4-dimethoxyphenyl)-4-(diphenylmethyl)-1-piperazineethanol $C_{27}H_{32}N_2O_3$

Recommended International Nonproprietary Name (Latin, English)	*Chemical Name or Description and Molecular Formula*
telimomabum aritoxum telimomab aritox	ricin A chain-antibody T 101 Fab fragment immunotoxin
terdecamycinum terdecamycin	4-methyl-1-piperazinecarboxylic acid, 7-ester with (−)-*N*-[1*S*,2*R*,3*E*,5*E*,7*S*,9*E*,11*E*,13*S*,15*R*,19*R*)-7,13-dihydroxy-1,4,10,19-tetramethyl-17,18-dioxo-16-oxabicyclo[13.2.2]nonadeca-3,5,9,11-tetraen-2-yl]pyruvamide *or* (−)-*N*-[(1*S*,2*R*,3*E*,5*E*,7*S*,9*E*,11*E*,13*S*,15*R*,19*R*)-7,13-dihydroxy-1,4,10,19-tetramethyl-17,18-dioxo-16-oxabicyclo[13.2.2]nonadeca-3,5,9,11-tetraen-2-yl]pyruvamide 7-(4-methyl-1-piperazinecarboxylate) $C_{31}H_{43}N_3O_8$
terlakirenum terlakiren	isopropyl (α*R*,β*S*)-α-hydroxy-β-[(*R*)-3-(methylthio)-2-[(*S*)-α-4-morpholinecarboxamidohydrocinnamamido]propionamido]=cyclohexanebutyrate $C_{31}H_{48}N_4O_7S$
tetrofosminum tetrofosmin	ethylenebis[bis(2-ethoxyethyl)phosphine] $C_{18}H_{40}O_4P_2$
tinzaparinum natricum tinzaparin sodium	Sodium salt of depolymerized heparin obtained by heparinase from *Flavobacterium heparinum* (heparin lyase: EC 4.2.2.7) degradation of heparin from pork intestinal mucosa; the majority of the components have a 2-*O*-sulfo-4-enepyranosuronic acid structure at the non-reducing end and a 2-*N*,6-*O*-disulfo-D-glucosamine structure at the reducing end of their chain; the relative molecular mass is 4500 ± 1500, 70 per cent of which ranging between 1500 and 10 000, the degree of sulfatation is 2 to 2,5 per disaccharidic unit.
tolcaponum tolcapone	3,4-dihydroxy-4′-methyl-5-nitrobenzophenone $C_{14}H_{11}NO_5$
tolterodinum tolterodine	(+)-(*R*)-2-[α-[2-(diisopropylamino)ethyl]benzyl]-*p*-cresol $C_{22}H_{31}NO$
tretinoinum tocoferilum tretinoin tocoferil	(±)-(2*R**)-2,5,7,8-tetramethyl-2-[(4*R**,8*R**)-4,8,12-trimethyltridecyl]-6-chromanyl retinoate $C_{49}H_{76}O_3$
trimegestonum trimegestone	17β-(*S*)-lactoyl-17-methylestra-4,9-dien-3-one $C_{22}H_{30}O_3$
tucaresolum tucaresol	α-(2-formyl-3-hydroxyphenoxy)-*p*-toluic acid $C_{15}H_{12}O_5$
tuvirumabum tuvirumab	human monoclonal immunoglobulin G1, λ-chain, anti-hepatitis B virus surface antigen
unoprostonum unoprostone	(+)-(*Z*)-7-[(1*R*,2*R*,3*R*,5*S*)-3,5-dihydroxy-2-(3-oxodecyl)cyclopentyl]-5-heptenoic acid $C_{22}H_{38}O_5$
utibaprilatum utibaprilat	(*S*)-2-*tert*-butyl-4-[(*S*)-N-[(*S*)-1-carboxy-3-phenylpropyl]alanyl-Δ^2-1,3,4-thiadiazoline-5-carboxylic acid $C_{20}H_{27}N_3O_5S$

Recommended International Nonproprietary Name (Latin, English)	*Chemical Name or Description and Molecular Formula*
velaresolum velaresol	5-(2-formyl-3-hydroxyphenoxy)valeric acid $C_{12}H_{14}O_5$
verlukastum verlukast	3-[[(α*R*)-*m*-[(*E*)-2-(7-chloro-2-quinolyl)vinyl]-α-[[2-(dimethylcarbamoyl)ethyl]thio]benzyl]thio]propionic acid $C_{26}H_{27}ClN_2O_3S_2$
voglibosum voglibose	3,4-dideoxy-4-[[2-hydroxy-1-(hydroxymethyl)ethyl]amino]-2-*C*-(hydroxymethyl)-*D*-epi-inositol $C_{10}H_{21}NO_7$
zalcitabinum zalcitabine	2′,3′-dideoxycytidine $C_9H_{13}N_3O_3$
zaldaridum zaldaride	(±)-1-[1-[(4-methyl-4*H*,6*H*-pyrrolo[1,2-*a*][4,1]benzoxazepin-4-yl)methyl]-4-piperidyl]-2-benzimidazolinone $C_{28}H_{28}N_4O_2$
zoniclezolum zoniclezole	5-chloro-3-(1-imidazol-1-ylethyl)-1,2-benzisoxazole $C_{12}H_{10}ClN_3O$

AMENDMENTS TO PREVIOUS LISTS

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

p. 5	felodipinum felodipine	*replace the chemical name by the following.* (±)-ethyl methyl 4-(2,3-dichlorophenyl)-1,4-dihydro-2,6-dimethyl-3,5-pyridinedicarboxylate

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

p. 7	glimepiridum glimepiride	*replace the chemical name by the following:* 1-[[*p*-[2-(3-ethyl-4-methyl-2-oxo-3-pyrroline-1-carboxamido) = ethyl]phenyl]sulfonyl]-3-(*trans*-4-methylcyclohexyl)urea

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

p. 10 teceleukinum
teceleukin

replace the chemical name and the molecular forr

N-L-methionylinterleukin 2 (human)
$C_{698}H_{1127}N_{179}O_{204}S_8$

Recommended International Nonproprietary Names (Rec. INN): List 27

p 6 limaprostum
limaprost

replace the chemical name by the following:

(*E*)-7-[(1*R*,2*R*,3*R*)-3-hydroxy-2-[(*E*)-(3*S*,5*S*)-3-hydro
oxocyclopentyl]-2-heptenic acid

p. 8 ramoplaninum
ramoplanin

replace the description and the molecular formula

glycopeptide antibiotic produced by *actinoplanes* :
Ramoplanin is a complex antibiotic consisting of a
designated as ramoplanin A_2 and a small amount
ramoplanin A_1 and A_3.
$C_{112-120}H_{142-156}ClN_{21}O_{35-40}$

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

p. 14 niguldipinum
niguldipine

replace the chemical name by the following:

(−)-(*S*)-3-(4,4-diphenylpiperidino)propyl methyl 1,
4-(*m*-nitrophenyl)-3,5-pyridinedicarboxylate

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

p. 4 cilobradinum
cilobradine

replace the chemical name by the following:

(+)-(*S*)-3-[[1-(3,4-dimethoxyphenethyl)-3-piperidyl]
dimethoxy-2*H*-3-benzazepin-2-one

p. 4 dalfopristinum
dalfopristin

replace the chemical name by the following:

(3*R*,4*R*,5*E*,10*E*,12*E*,14*S*,26*R*,26a*S*)-26-[[2-(diethylan
8,9,14,15,24,25,26,26a-octahydro-14-hydroxy-3-isop
21,18-nitrilo-1*H*,22*H*-pyrrolo[2.1*c*][1,8,4,19]dioxadi
1,7,16,22(4*H*,17*H*)-tetrone

p. 6 fantofaronum
fantofarone

replace the molecular formula by the following:

$C_{31}H_{38}N_2O_5S$

p. 14 terikalantum
terikalant

replace the chemical name by the following:

(−)-(*S*)-1-[2-(4-chromanyl)ethyl]-4-(3,4-dimethoxy