Supplement to
WHO Chronicle, 1984
Vol. 38, No. 4 (October)

International Nonproprietary Names for Pharmaceutical Substances

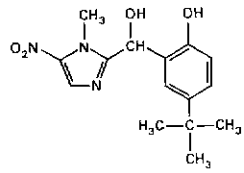
In accordance with article 3 of the Procedure for the Selection of Recommended International Nonproprietary Names for Pharmaceutical Substances,[1] notice is hereby given that the following names are under consideration by the World Health Organization as Proposed International Nonproprietary Names.

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 52 Prop. INN not later than 28 February 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 52[2]

Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae Chemical Abstracts Service (CAS) registry number*
abunidazolum abunidazole	*α*-(5-*tert*-butyl-2-hydroxyphenyl)-1-methyl-5-nitroimidazole-2-methanol $C_{15}H_{19}N_3O_4$ 91017-58-2

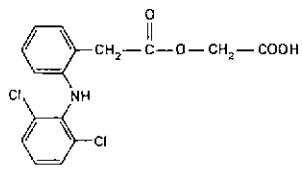
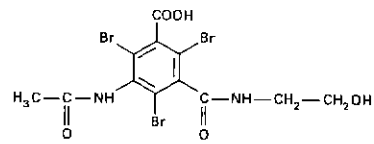
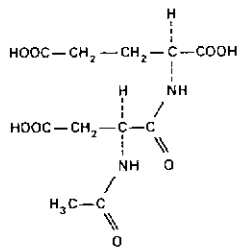
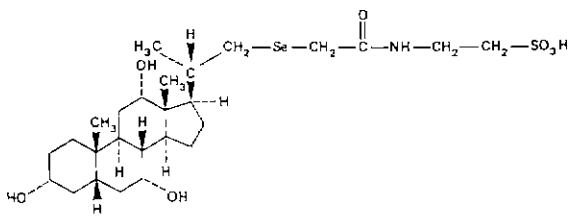


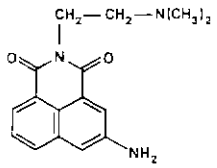
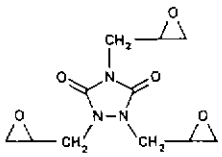
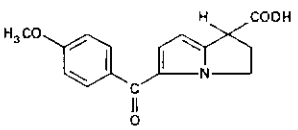
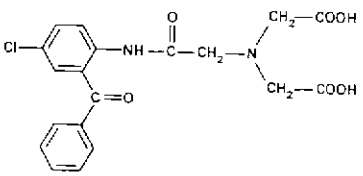
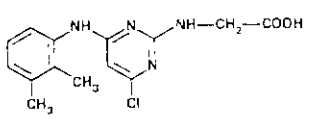
Comprehensive information on the INN programme can be found in WHO Technical Report Series, No 581, 1975 (*Nonproprietary Names for Pharmaceutical Substances* Twentieth Report of the WHO Expert Committee), ISBN 92 4 120581 4 (price Sw fr. 6.–), an account of this publication will be found on page 27 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

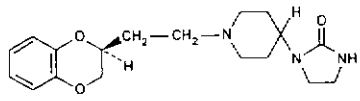
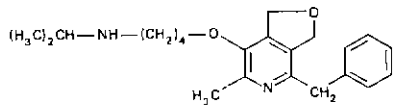
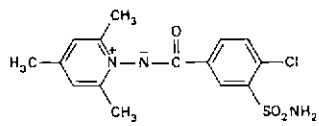
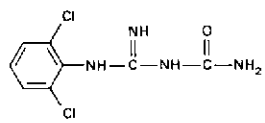
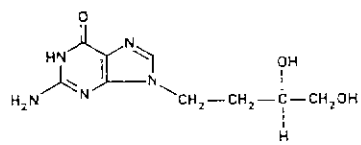
These publications may be obtained, direct or through booksellers, from the sales agents listed on the back cover of the *WHO Chronicle* Orders from countries where sales agents have not yet been appointed may be addressed to World Health Organization, Distribution and Sales Service, 1211 Geneva 27,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

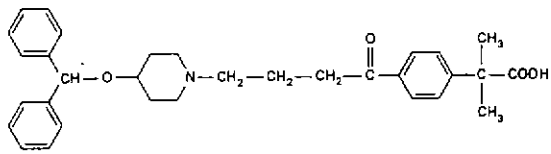
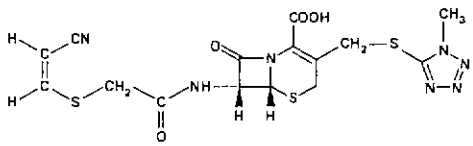
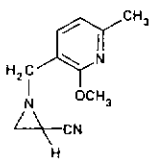
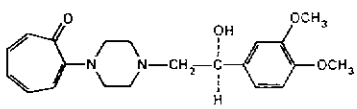
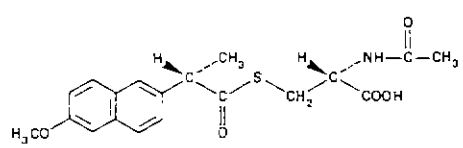
[1] See Annex 1, p. 25

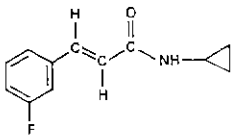
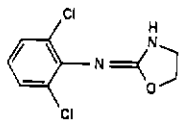
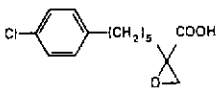
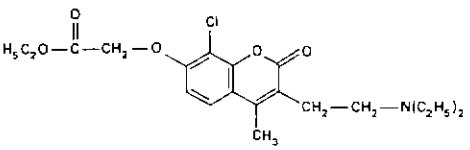
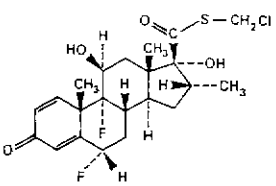
[2] Other lists of proposed and recommended international nonproprietary names can be found in *Cumulative List No. 6*, 1982.

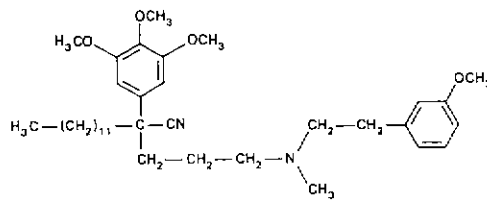
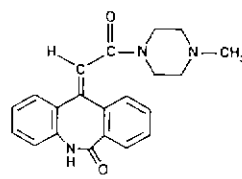
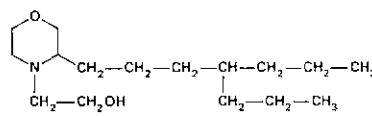
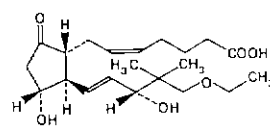
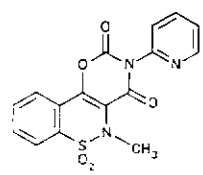
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description. Molecular and Graphic Formulae Chemical Abstracts Service (CAS) registry number*
aceclofenacum aceclofenac	glycolic acid, [o-(2,6-dichloroanilino)phenyl]acetate (ester) $C_{16}H_{13}Cl_2NO_4$ 89796-99-6 
acidum broxitalamicum broxitalamic acid	5-acetamido-2,4,6-tribromo-*N*-(2-hydroxyethyl)isophthalamic acid $C_{12}H_{11}Br_3N_2O_5$ 86216-41-3 
acidum isospaglumicum isospaglumic acid	*N*-(*N*-acetyl-L-α-aspartyl)-L-glutamic acid $C_{11}H_{16}N_2O_8$ 3106-85-2 
acidum tauroselcholicum tauroselcholic acid	*N*-[[[(20*S*)-3α,7α,12α-trihydroxy-20-methyl-5β-pregnan-21-yl]selenyl]acetyl]taurine $C_{26}H_{45}NO_7SSe$ 75018-71-2 
almagodratum almagodrate	decaaluminum pentamagnesium hexacosahydroxide pentaoxide bis(sulfate) hydrate $Al_{10}H_{26}Mg_5O_{39}S_2 \cdot nH_2O$ $[Al_{10}Mg_5(OH)_{26}O_5](SO_4)_2, nH_2O$

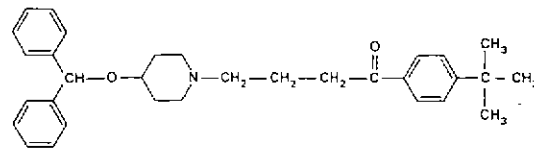
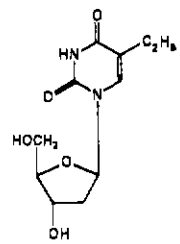
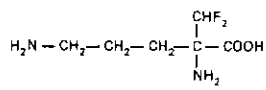
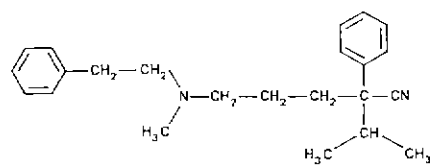
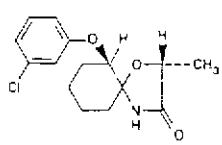
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae Chemical Abstracts Service (CAS) registry number*
amonafidum amonafide	3-amino-*N*-[2-(dimethylamino)ethyl]naphthalimide $C_{16}H_{17}N_3O_2$ 69408-81-7 
anaxironum anaxirone	tris(2,3-epoxypropyl)bicarbamimide $C_{11}H_{15}N_3O_5$ 77658-97-0 
anirolacum anirolac	(±)-5-*p*-anisoyl-2,3-dihydro-1*H*-pyrrolizine-1-carboxylic acid $C_{16}H_{15}NO_4$ 66635-85-6 
arclofeninum arclofenin	[[[(2-benzoyl-4-chlorophenyl)carbamoyl]methyl]imino]diacetic acid $C_{19}H_{17}ClN_2O_6$ 87071-16-7 
aronixilum aronixil	*N*-[4-chloro-6-(2,3-xylidino)-2-pyrimidinyl]glycine $C_{14}H_{15}ClN_4O_2$ 86627-15-8 

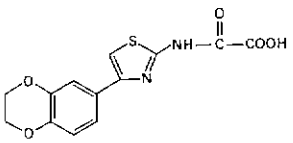
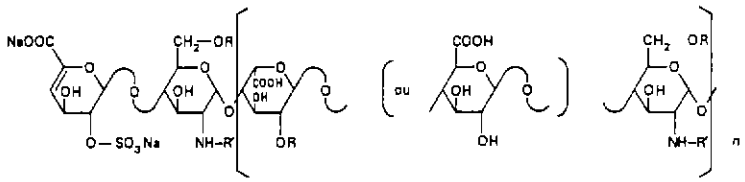
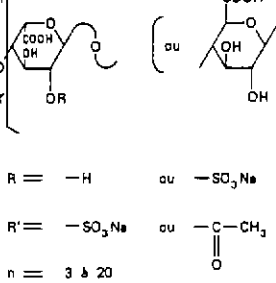
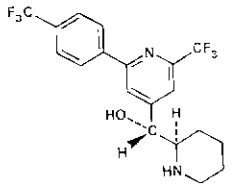
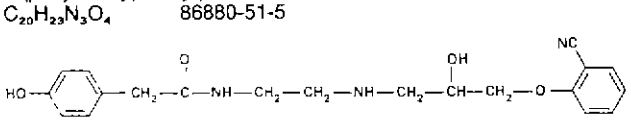
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae Chemical Abstracts Service (CAS) registry number*
azaloxanum azaloxan	(*S*)-1-[1-[2-(1,4-benzodioxan-2-yl)ethyl]-4-piperidyl]-2-imidazolidinone $C_{18}H_{25}N_3O_3$ 72822-56-1 
barucainidum barucainide	4-benzyl-1,3-dihydro-7-[4-(isopropylamino)butoxy]-6-methylfuro[3,4-*c*]pyridine $C_{22}H_{30}N_2O_2$ 79784-22-8 
besulpamidum besulpamide	1-(4-chloro-3-sulfamoylbenzamido)-2,4,6-trimethylpyridinium hydroxide, inner salt $C_{15}H_{16}ClN_3O_3S$ 90992-25-9 
biclodilum biclodil	[(2,6-dichlorophenyl)amidino]urea $C_8H_8Cl_2N_4O$ 85125-49-1 
buciclovirum buciclovir	(*R*)-9-(3,4-dihydroxybutyl)guanine $C_9H_{13}N_5O_3$ 86304-28-1 

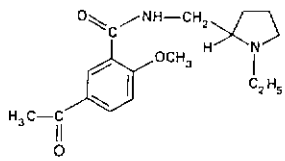
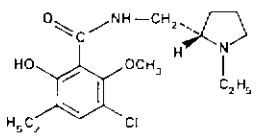
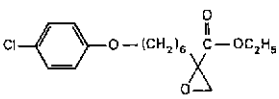
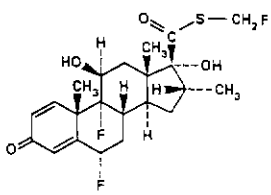
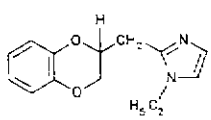
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae Chemical Abstracts Service (CAS) registry number*
carebastinum carebastine	*p*-[4-[4-(diphenylmethoxy)piperidino]butyryl]-α-methylhydratropic acid $C_{32}H_{37}NO_4$ 90729-42-3 
cefivitrilum cefivitril	(6*R*,7*R*)-7-[2-[[(*Z*)-2-cyanovinyl]thio]acetamido]-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 $C_{15}H_{15}N_7O_4S_3$ 66474-36-0 
ciamexonum ciamexon	(±)-1-[(2-methoxy-6-methyl-3-pyridyl)methyl]-2-aziridinecarbonitrile $C_{11}H_{13}N_3O$ 75985-31-8 
cladopum cladopa	(−)-(*S*)-2-[4-(β-hydroxy-3,4-dimethoxyphenethyl)-1-piperazinyl]-2,4,6-cycloheptatrien-1-one $C_{21}H_{26}N_2O_4$ 80109-27-9 
cinaproxenum cinaproxen	*N*-acetyl-L-cysteine (+)-(*S*)-6-methoxy-α-methyl-2-naphthaleneacetate (ester) $C_{19}H_{21}NO_5S$ 89163-44-0 

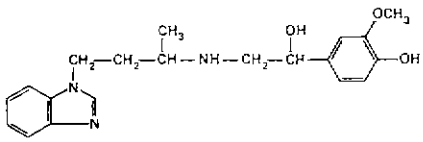
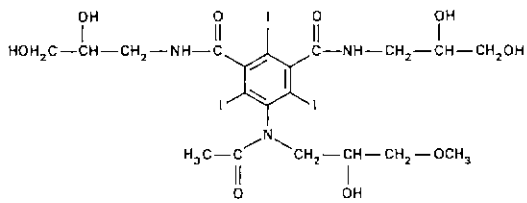
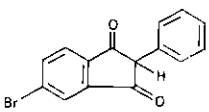
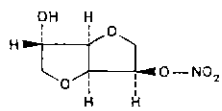
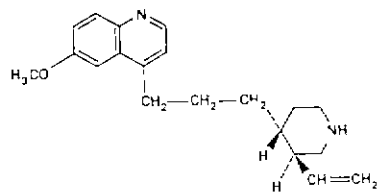
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae Chemical Abstracts Service (CAS) registry number*
cinflumidum cinflumide	(*E*)-*N*-cyclopropyl-*m*-fluorocinnamamide $C_{12}H_{12}FNO$ 64379-93-7 
clidafidinum clidafidine	2-[(2,6-dichlorophenyl)imino]oxazolidine $C_9H_8Cl_2N_2O$ 33588-20-4 
clomoxirum clomoxir	(±)-2-[5-(*p*-chlorophenyl)pentyl]glycidic acid $C_{14}H_{17}ClO_3$ 88431-47-4 
cloricromenum cloricromen	ethyl [[8-chloro-3-[2-(diethylamino)ethyl]-4-methyl-2-oxo-2*H*-1-benzopyran-7-yl]oxy]acetate $C_{20}H_{26}ClNO_5$ 68206-94-0 
cloticasonum cloticasone	*S*-(chloromethyl) 6α,9-difluoro-11β,17-dihydroxy-16α-methyl-3-oxoandrosta-1,4-diene-17β-carbothioate $C_{22}H_{27}ClF_2O_4S$ 87556-66-9 

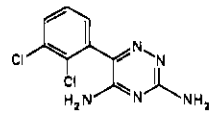
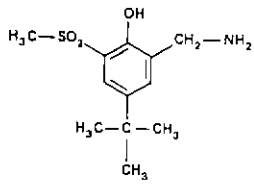
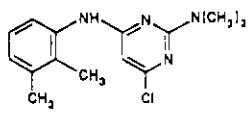
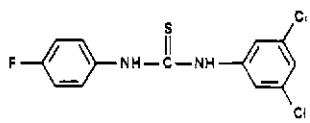
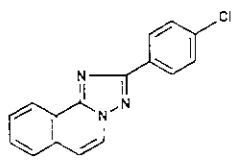
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae Chemical Abstracts Service (CAS) registry number*
dagapamilum dagapamil	2-[3-[(*m*-methoxyphenethyl)methylamino]propyl]-2-(3,4,5-trimethoxyphenyl)tetradecanenitrile $C_{36}H_{56}N_2O_4$ 85247-76-3 
darenzepinum darenzepine	(*E*)-1-[(5,6-dihydro-6-oxo-11-morphanthridinylidene)acetyl]-4-methylpiperazine $C_{21}H_{21}N_3O_2$ 84629-61-8 
decapinolum decapinol	(±)-3-(4-propylheptyl)-4-morpholineethanol $C_{16}H_{33}NO_2$ 79874-76-3 
dimoxaprostum dimoxaprost	(*Z*)-7-[(1*RS*,2*RS*,3*RS*)-2-[(*E*)-(3*R*)-5-ethoxy-3-hydroxy-4,4-dimethyl-1-pentenyl]-3-hydroxy-5-oxocyclopentyl]-5-heptenoic acid $C_{21}H_{34}O_6$ 90243-98-4 
droxicamum droxicam	5-methyl-3-(2-pyridyl)-2*H*,5*H*-1,3-oxazino[5,6-*c*][1,2]benzothiazine-2,4(3*H*)-dione 6,6-dioxide $C_{16}H_{11}N_3O_5S$ 90101-16-9 

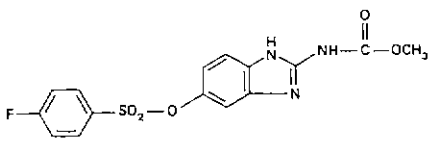
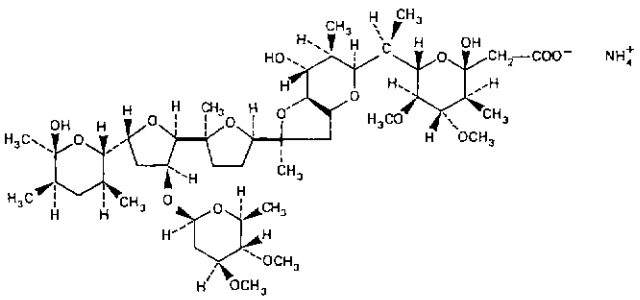
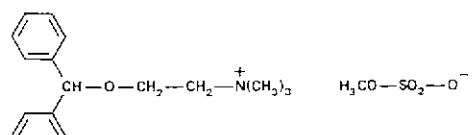
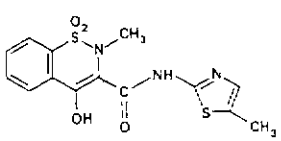
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae Chemical Abstracts Service (CAS) registry number*
ebastinum ebastine	4′-*tert*-butyl-4-[4-(diphenylmethoxy)piperidino]butyrophenone $C_{32}H_{39}NO_2$ 90729-43-4 
edoxudinum edoxudine	2′-deoxy-5-ethyluridine $C_{11}H_{16}N_2O_5$ 15176-29-1 
eflornithinum eflornithine	2-(difluoromethyl)-DL-ornithine $C_6H_{12}F_2N_2O_2$ 67037-37-0 
emopamilum emopamil	2-isopropyl-5-(methylphenethylamino)-2-phenylvaleronitrile $C_{23}H_{30}N_2$ 78370-13-5 
enilospironum enilospirone	(2*R*,5*RS*,6*R*)-6-(*m*-chlorophenoxy)-2-methyl-1-oxa-4-azaspiro-[4 5]decan-3-one $C_{15}H_{18}ClNO_3$ 59798-73-1 

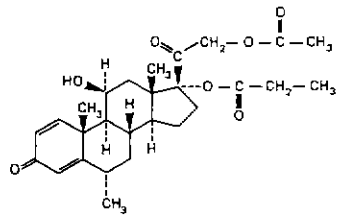
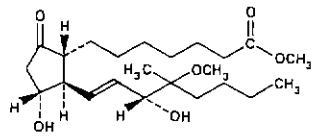
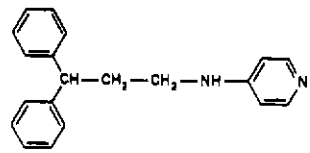
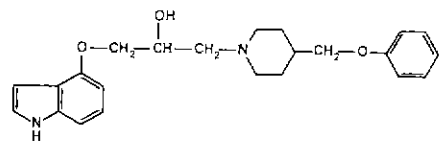
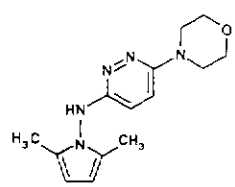
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae Chemical Abstracts Service (CAS) registry number*
enoxamastum enoxamast	[4-(1,4-benzodioxan-6-yl)-2-thiazolyl]oxamic acid $C_{13}H_{10}N_2O_5S$ 74604-76-5 
enoxaparinum enoxaparin	heparin of low molecular mass presenting a 4-eno pyranosuronate sodium structure at the non reducing end of the chain  
enpirolinum enpiroline	(±)-(*R**,*R**)-α-[2-(trifluoromethyl)-6-(α,α,α-trifluoro-*p*-tolyl)-4-pyridyl]-2-piperidinemethanol $C_{19}H_{18}F_6N_2O$ 66364-73-6 
epanololum epanolol	(±)-*N*-[2-[[3-(*o*-cyanophenoxy)-2-hydroxypropyl]amino]ethyl]-2-(*p*-hydroxyphenyl)acetamide $C_{20}H_{23}N_3O_4$ 86880-51-5 

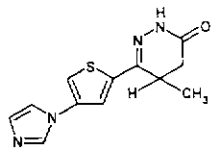
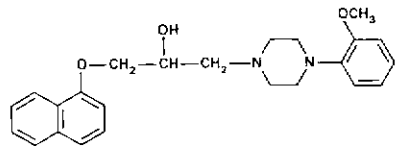
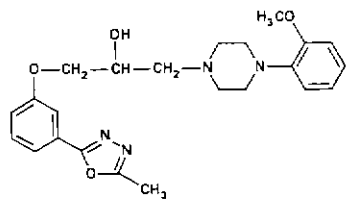
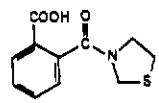
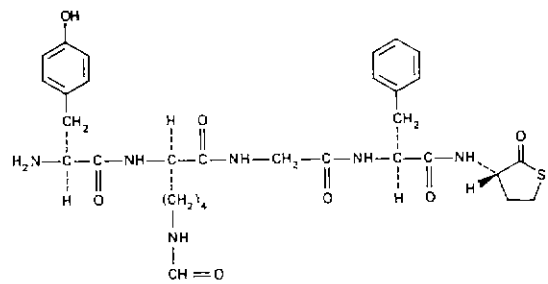
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae Chemical Abstracts Service (CAS) registry number*
etacepridum etacepride	5-acetyl-*N*-[(1-ethyl-2-pyrrolidinyl)methyl]-*o*-anisamide $C_{17}H_{24}N_2O_3$ 68788-56-7 
eticlopridum eticlopride	(−)-(*S*)-5-chloro-3-ethyl-*N*-[(1-ethyl-2-pyrrolidinyl)methyl]-6-methoxysalicylamide $C_{17}H_{25}ClN_2O_3$ 84226-12-0 
etomoxirum etomoxir	(±)-ethyl 2-[6-(*p*-chlorophenoxy)hexyl]glycidate $C_{17}H_{23}ClO_4$ 82258-36-4 
fluticasone fluticasone	*S*-(fluoromethyl) 6α,9-difluoro-11β,17-dihydroxy-16α-methyl-3-oxoandrosta-1,4-diene-17β-carbothioate $C_{22}H_{27}F_3O_4S$ 90566-53-3 
imiloxanum imiloxan	(±)-2-(1,4-benzodioxan-2-ylmethyl)-1-ethylimidazole $C_{14}H_{16}N_2O_2$ 81167-16-0 

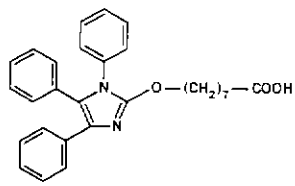
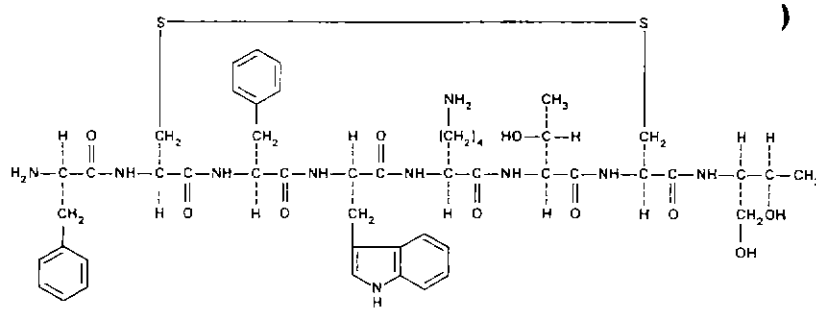
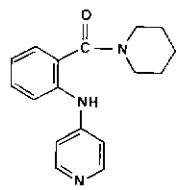
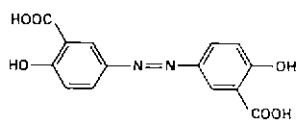
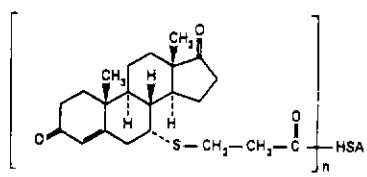
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae Chemical Abstracts Service (CAS) registry number*
imoxiterolum imoxiterol	α-[[[3-(1-benzimidazolyl)-1-methylpropyl]amino]methyl]vanillyl alcohol $C_{20}H_{25}N_3O_3$ 88578-07-8 
iopentolum iopentol	*N,N'*-bis(2,3-dihydroxypropyl)-5-[*N*-(2-hydroxy-3-methoxypropyl)acetamido]-2,4,6-triiodoisophthalamide $C_{20}H_{28}I_3N_3O_9$ 89797-00-2 
isobromindionum isobromindione	(±)-5-bromo-2-phenyl-1,3-indandione $C_{15}H_9BrO_2$ 1470-35-5 
isosorbidi mononitras isosorbide mononitrate	1,4:3,6-dianhydro-D-glucitol 5-nitrate $C_6H_9NO_6$ 16051-77-7 
ivoqualinum ivoqualine	6-methoxy-4-[3-[(3*S*,4*R*)-3-vinyl-4-piperidyl]propyl]quinoline $C_{20}H_{26}N_2O$ 72714-75-1 

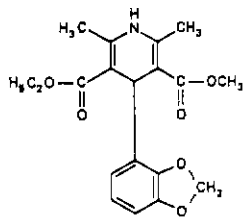
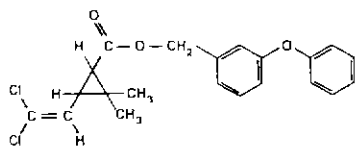
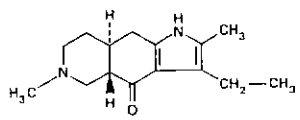
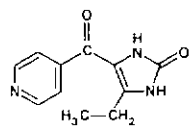
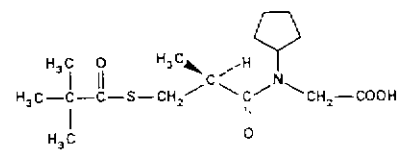
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae Chemical Abstracts Service (CAS) registry number*
lamotriginum lamotrigine	3,5-diamino-6-(2,3-dichlorophenyl)-*as*-triazine $C_9H_7Cl_2N_5$ 84057-84-1 
lemidosulum lemidosul	α-amino-4-*tert*-butyl-6-(methylsulfonyl)-*o*-cresol $C_{12}H_{19}NO_3S$ 88041-40-1 
lodinixilum lodinixil	4-chloro-2-(dimethylamino)-6-(2,3-xylidino)pyrimidine $C_{14}H_{17}ClN_4$ 86627-50-1 
loflucarbanum loflucarban	3,5-dichloro-4'-fluorothiocarbanilide $C_{13}H_9Cl_2FN_2S$ 790-69-2 
lotrifenum lotrifen	2-(*p*-chlorophenyl)-*s*-triazolo[5,1-*a*]isoquinoline $C_{16}H_{10}ClN_3$ 66535-86-2 

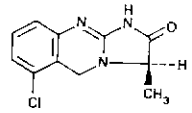
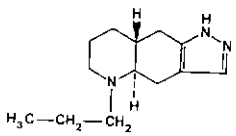
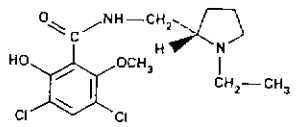
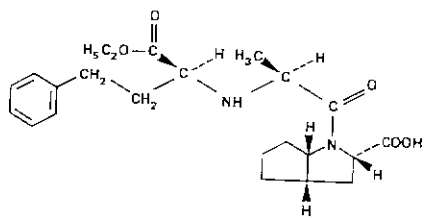
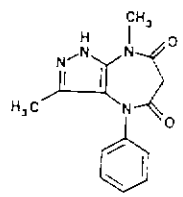
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae Chemical Abstracts Service (CAS) registry number*
luxabendazolum luxabendazole	methyl 5-hydroxy-2-benzimidazolecarbamate, *p*-fluorobenzenesulfonate (ester) $C_{15}H_{12}FN_3O_5S$ 90509-02-7 
maduramicinum maduramicin	ammonium (2*R*,3*S*,4*S*,5*R*,6*S*)-tetrahydro-2-hydroxy-6-[(*R*)-1-[(2*S*,5*R*,7*S*,8*R*,9*S*)-9-hydroxy-2,8-dimethyl-2-[(2*S*,2′*R*,3′*S*,5*R*,5′*R*)-octahydro-2-methyl-3′-[[(2*R*,4*S*,5*S*,6*S*)-tetrahydro-4,5-dimethoxy-6-methyl-2*H*-pyran-2-yl]oxy]-5′-[(2*S*,3*S*,5*R*,6*S*)-tetrahydro-6-hydroxy-3,5,6-trimethyl-2*H*-pyran-2-yl][2,2′-bifuran]-5-yl]-1,6-dioxaspiro[4 5]dec-7-yl]ethyl]-4,5-dimethoxy-3-methyl-2*H*-pyran-2-acetate $C_{47}H_{83}NO_{17}$ 84878-61-5 
mefenidramii metilsulfas mefenidramium methylsulfate	[2-(diphenylmethoxy)ethyl]trimethylammonium methyl sulfate $C_{19}H_{27}NO_5S$ 4858-60-0 
meloxicamum meloxicam	4-hydroxy-2-methyl-*N*-(5-methyl-2-thiazolyl)-2*H*-1,2-benzothiazine-3-carboxamide 1,1-dioxide $C_{14}H_{13}N_3O_4S_2$ 71125-38-7 

Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae Chemical Abstracts Service (CAS) registry number*
methylprednisoloni aceponas methylprednisolone aceponate	11β,17,21-trihydroxy-6α-methylpregna-1,4-diene-3,20-dione, 21-acetate 17-propionate $C_{27}H_{36}O_7$ 86401-95-8 
mexiprostilum mexiprostil	methyl (1*R*,2*R*,3*R*)-3-hydroxy-2-[(*E*)-(3*R*)-3-hydroxy-4-methoxy-4-methyloctyl]-5-oxocyclopentaneheptanoate $C_{23}H_{40}O_6$ 88980-20-5 
milverinum milverine	4-[(3,3-diphenylpropyl)amino]pyridine $C_{20}H_{20}N_2$ 75437-14-8 
mindodilolum mindodilol	(±)-α-[(indol-4-yloxy)methyl]-4-(phenoxymethyl)-1-piperidineethanol $C_{23}H_{28}N_2O_3$ 70260-53-6 
mopidralazinum mopidralazine	4-[6-[(2,5-dimethylpyrrol-1-yl)amino]-3-pyridazinyl]morpholine $C_{14}H_{19}N_5O$ 75841-82-6 

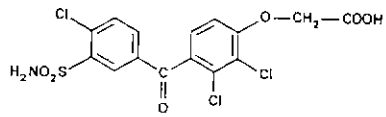
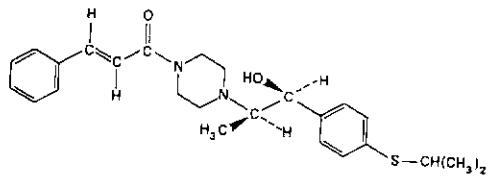
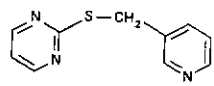
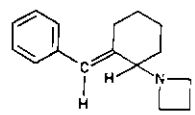
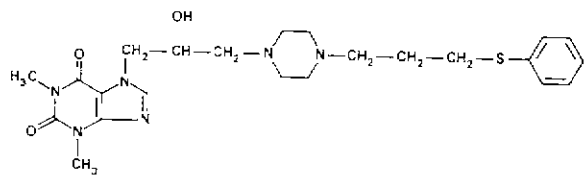
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae Chemical Abstracts Service (CAS) registry number*
motapizonum motapizone	(±)-4,5-dihydro-6-(4-imidazol-1-yl-2-thienyl)-5-methyl-3(2*H*)-pyridazinone $C_{12}H_{12}N_4OS$ 90697-57-7 
naftopidilum naftopidil	(±)-4-(*o*-methoxyphenyl)-α-[(1-naphthyloxy)methyl]-1-piperazineethanol $C_{24}H_{28}N_2O_3$ 57149-07-2 
nesapidilum nesapidil	(±)-1-[4-(*o*-methoxyphenyl)-1-piperazinyl]-3-[*m*-(5-methyl-1,3,4-oxadiazol-2-yl)phenoxy]-2-propanol $C_{23}H_{28}N_4O_4$ 90326-85-5 
nesosteinum nesosteine	*o*-(3-thiazolidinylcarbonyl)benzoic acid $C_{11}H_{11}NO_3S$ 84233-61-4 
ociltidum ociltide	L-tyrosyl-N^{ε}-formyl-D-lysylglycylphenyl-*N*-(tetrahydro-2-oxo-3-thienyl)-L-alaninamide $C_{31}H_{40}N_6O_7S$ 78410-57-8 

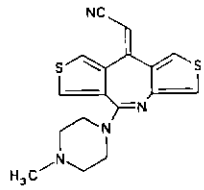
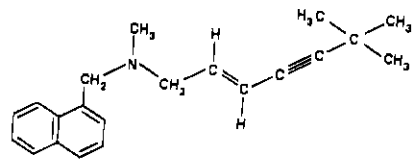
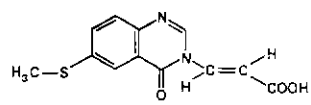
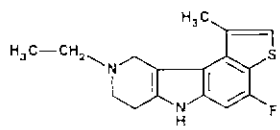
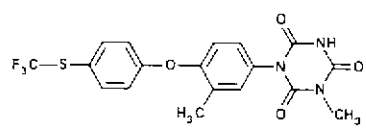
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae Chemical Abstracts Service (CAS) registry number*
octimibatum octimibate	8-[(1,4,5-triphenylimidazol-2-yl)oxy]octanoic acid $C_{29}H_{30}N_2O_3$ 89838-96-0 
octreotidum octreotide	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 $C_{49}H_{66}N_{10}O_{10}S_2$ 83150-76-9 
oforninum ofornine	1-(*N*-4-pyridylanthraniloyl)piperidine $C_{17}H_{19}N_3O$ 87784-12-1 
olsalazinum olsalazine	5,5′-azodisalicylic acid *or* C I. mordant yellow 5 $C_{14}H_{10}N_2O_6$ 15722-48-2 
ovandrotonum albuminum ovandrotone albumin	3-[(3,17-dioxoandrost-4-en-7α-yl)thio]propionic acid, serum albumin conjugate 

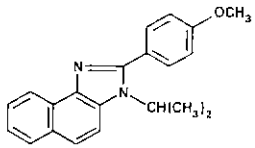
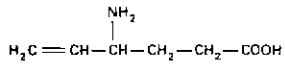
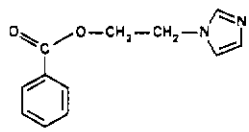
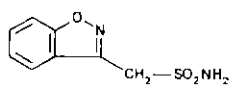
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae Chemical Abstracts Service (CAS) registry number*
oxodipinum oxodipine	ethyl methyl 1,4-dihydro-2,6-dimethyl-4-[2,3-(methylenedioxy)phenyl]-3,5-pyridinedicarboxylate $C_{19}H_{21}NO_6$ 90729-41-2 
)rmethrinum permethrin	*m*-phenoxybenzyl 3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate $C_{21}H_{20}Cl_2O_3$ 52645-53-1 
piquindonum piquindone	(±)-*trans*-3-ethyl-1,4a,5,6,7,8,8a,9-octahydro-2,6-dimethyl-4*H*-pyrrolo[2,3-*g*]isoquinolin-4-one $C_{15}H_{22}N_2O$ 78541-97-6 
piroximonum piroximone	4-ethyl-5-isonicotinoyl-4-imidazolin-2-one $C_{11}H_{11}N_3O_2$ 84490-12-0 
pivoprilum pivopril	2,2-dimethylthiopropionic acid, *S*-ester with (−)-(*S*)-*N*-cyclopentyl-*N*-(3-mercapto-2-methylpropionyl)glycine $C_{16}H_{27}NO_4S$ 81045-50-3 

Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae Chemical Abstracts Service (CAS) registry number*
quazinonum quazinone	(*R*)-6-chloro-1,5-dihydro-3-methylimidazo[2,1-*b*]quinazolin-2(3*H*)-one $C_{11}H_{10}ClN_3O$ 70018-51-8 
quinpirolum quinpirole	(−)-(4a*R*,8a*R*)-4,4a,5,6,7,8,8a,9-octahydro-5-propyl-1*H*-pyrazolo[3,4-*g*]quinoline $C_{13}H_{21}N_3$ 85760-74-3 
raclopridum raclopride	(−)-(*S*)-3,5-dichloro-*N*-[(1-ethyl-2-pyrrolidinyl)methyl]-6-hydroxy-*o*-anisamide $C_{15}H_{20}Cl_2N_2O_3$ 84225-95-6 
ramiprilum ramipril	(2*S*,3a*S*,6a*S*)-1-[(*S*)-*N*-[(*S*)-1-carboxy-3-phenylpropyl]alanyl]-octahydrocyclopenta[*b*]pyrrole-2-carboxylic acid, 1-ethyl ester $C_{23}H_{32}N_2O_5$ 87333-19-5 
razobazamum razobazam	4,8-dihydro-3,8-dimethyl-4-phenylpyrazolo[3,4-*b*][1,4]diazepine-5,7(1*H*,6*H*)-dione $C_{14}H_{14}N_4O_2$ 78466-98-5 

Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae Chemical Abstracts Service (CAS) registry number*
rifabutinum rifabutin	(9*S*,12*E*,14*S*,15*R*,16*S*,17*R*,18*R*,19*R*,20*S*,21*S*,22*E*,24*Z*)-6,16,18,20-tetrahydroxy-1′-isobutyl-14-methoxy-7,9,15,17,19,21,25-heptamethylspiro[9,4-(epoxypentadeca[1,11,13]trienimino)-2*H*-furo[2′,3′.7,8]naphth[1,2-*d*]imidazole-2,4′-piperidine]-5,10,26-(3*H*,9*H*)-trione 16-acetate $C_{46}H_{62}N_4O_{11}$ 72559-06-9
rilapinum rilapine	(*Z*)-2-chloro-10-(4-methyl-1-piperazinyl)-5*H*-dibenzo-[*a*,*d*]cycloheptene-$\Delta^{5,\alpha}$-acetonitrile $C_{22}H_{20}ClN_3$ 79781-95-6
salmaterolum salmaterol	(±)-4-hydroxy-α′-[[[6-(4-phenylbutoxy)hexyl]amino]methyl]-*m*-xylene-α,α′-diol $C_{25}H_{37}NO_4$ 89365-50-4
spiclaminum spiclamine	(−)-(1*R*,2*R*,3*S*,4*S*)-3-(*p*-chlorophenyl)-2′-morpholinospiro[norbornane-2,5′-[1]pyrroline] $C_{20}H_{25}ClN_2O$ 90243-97-3

Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae Chemical Abstracts Service (CAS) registry number*
sulicrinatum sulicrinat	[2,3-dichloro-4-(4-chloro-3-sulfamoylbenzoyl)phenoxy]acetic acid $C_{15}H_{10}Cl_3NO_6S$ 90207-12-8 
sunagrelum sunagrel	*erythro*-4-cinnamoyl-α-[*p*-(isopropylthio)phenyl]-β-methyl-1-piperazineethanol $C_{25}H_{32}N_2O_2S$ 85418-85-5 
tasuldinum tasuldine	2-[(3-pyridylmethyl)thio]pyrimidine $C_{10}H_9N_3S$ 88579-39-9 
tazadolenum tazadolene	(±)-(*E*)-1-(2-benzylidenecyclohexyl)azetidine $C_{16}H_{21}N$ 84812-85-1 
tazifyllinum tazifylline	7-[2-hydroxy-3-[4-[3-(phenylthio)propyl]-1-piperazinyl]propyl]theophylline $C_{23}H_{32}N_6O_3S$ 79712-55-3 

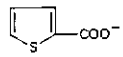
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae Chemical Abstracts Service (CAS) registry number*
tenilapinum tenilapine	(*E*)-5-(4-methyl-1-piperazinyl)-9*H*-dithieno[3,4-*b*:3′,4′-*e*]-azepine-$\Delta^{9,\alpha}$-acetonitrile $C_{17}H_{16}N_4S_2$ 82650-83-7 
terbinafinum terbinafine	(*E*)-*N*-(6,6-dimethyl-2-hepten-4-ynyl)-*N*-methyl-1-naphthalenemethylamine $C_{21}H_{25}N$ 78628-80-5 
tiacrilastum tiacrilast	(*E*)-6-(methylthio)-4-oxo-3(4*H*)-quinazolineacrylic acid $C_{12}H_{10}N_2O_3S$ 78299-53-3 
tilucarbinum tilucarbine	9-ethyl-4-fluoro-7,8,9,10-tetrahydro-1-methyl-6*H*-pyrido[4,3-*b*]thieno[3,2-*e*]indole $C_{16}H_{17}FN_2S$ 89875-86-5 
toltrazurilum toltrazuril	1-methyl-3-[4-[*p*-[(trifluoromethyl)thio]phenoxy]-*m*-tolyl]-*s*-triazine-2,4,6(1*H*,3*H*,5*H*)-trione $C_{18}H_{14}F_3N_3O_4S$ 69004-03-1 

Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae Chemical Abstracts Service (CAS) registry number*
tomoxiprolum tomoxiprole	3-isopropyl-2-(*p*-methoxyphenyl)-3*H*-naphth[1,2-*d*]imidazole $C_{21}H_{20}N_2O$ 76145-76-1 
vigabatrinum vigabatrin	4-amino-5-hexenoic acid $C_6H_{11}NO_2$ 60643-86-9 
zimidobenum zimidoben	2-imidazol-1-ylethyl benzoate *or* imidazole-1-ethanol benzoate (ester) $C_{12}H_{12}N_2O_2$ 90697-56-6 
zonisamidum zonisamide	1,2-benzisoxazole-3-methanesulfonamide $C_8H_8N_2O_3S$ 68291-97-4 

Names for Radicals and Groups

Some substances for which a proposed international nonproprietary name has been established may be used in the form of salts or esters. The radicals or groups involved may be of complex composition and it is then inconvenient to refer to them in systematic chemical nomenclature. Consequently, shorter nonproprietary names for some radicals and groups have been devised or selected, and they are suggested for use with the proposed international nonproprietary names.

tenoas	2-thiophenecarboxylate
tenoate	$C_5H_3O_2S$



AMENDMENT TO PREVIOUS LISTS

Cumulative List No. 6, 1982

International Nonproprietary Names (INN) for Pharmaceutical Substances:

	delete	*insert*
p. 162	interferonum interferon	interferonum alfa interferon alfa
		interferonum beta interferon beta
		interferonum gamma interferon gamma

The entries on interferon in List 12 of proposed and List 5 of recommended INNs respectively should be replaced by the following:

Interferon alfa: A secreted protein, known previously as leucocyte interferon or lymphoblastoid interferon, that is produced according to the information coded by a species of interferon gene and that exerts non-specific antiviral activity at least in homologous cells through cellular metabolic processes involving synthesis of both ribonucleic acid and protein. Sub-species of the human alfa gene produce protein variants designated by the hyphenated addition of a number, e.g., interferon alfa-2, or in the case of a mixture of proteins, by an alphanumeric designation e.g., N1, N2 etc. The numbers conform with the recommendations of the Interferon Nomenclature Committee; the alphanumeric designations will be assigned by the World Health Organization on request.

In the case of interferon alfa-2 it is necessary to qualify the number by a letter according to the peptide sequence occuring at positions 23 and 34 in the chain:

	Position	
	23	34
alfa-2A	Lys	His
alfa-2B	Arg	His
alfa-2C	Arg	Arg

Further assignments will be made by the World Health Organisation on request.'

Interferon beta: A secreted protein, known previously as fibroblast interferon, that is produced according to the information coded by a species of interferon gene and that exerts non-specific antiviral activity at least in homologous cells through cellular metabolic processes involving synthesis of both ribonucleic acid and protein.

Interferon gamma: A secreted protein, known previously as immune interferon, that is produced according to the information coded by a species of interferon gene and that exerts non-specific antiviral activity at least in homologous cells through cellular metabolic processes involving synthesis of both ribonucleic acid and protein.

	delete	*insert*
p. 218	noramidopyrini methanosulfonas natricum noramidopyrine methanesulfonate sodium	metamizolum metamizole

Vol. 20, No. 6

International Nonproprietary Names (Prop. INN): List 16

p 3	colestyraminum colestyramine	replace definition by. "A styrene-divinylbenzene copolymer containing quaternary ammonium groups Each colestyramine name is followed by a number e.g. colestyramine 20, 25 etc. The number divided by 10 indicates the approximative percentage of divinylbenzene."

Vol. 36, No. 5

International Nonproprietary Names (Prop. INN): List 48

	delete	*insert*
p. 2	acidum pseudomonicum pseudomonic acid	mupirocinum mupirocin

Vol. 37, No. 5

International Nonproprietary Names (Prop. INN): List 50

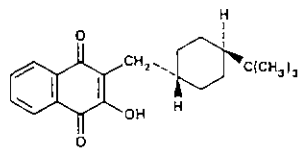
	delete	*insert*
p 12	fisalaminum fisalamine	mesalazinum mesalazine
p 21	nivadipinum nivadipine	nilvadipinum nilvadipine

Vol. 38, No. 2

International Nonproprietary Names (Prop. INN): List 51

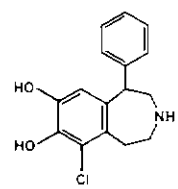
p. 3 buparvaquonum
buparvaquone

complete the chemical name by preceding it with (RS, RS; RS, SR) – and replace structure by:



p 8 fenoldopamum
fenoldopam

complete chemical name by preceding it with (±) – and replace structure by:



p. 8 glunicatum
glunicate

replace molecular formula by. $C_{36}H_{28}N_6O_{10}$

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 antihistamii
-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.–