Supplement to *WHO Chronicle*, 1975, Vol. 29, No. 3

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*.

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 33[2]

Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae*
acaprazinum acaprazine	*N*-[3-[4-(2,5-dichlorophenyl)-1-piperazinyl]propyl]acetamide $C_{15}H_{21}Cl_2N_3O$
acesulfamum acesulfame	6-methyl-1,2,3-oxathiazin-4(3*H*)-one 2,2-dioxide $C_4H_5NO_4S$

[1] See Annex, p. 28.

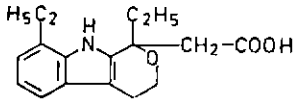
[2] Other lists of proposed international nonproprietary names can be found in *Chron. Wld Hlth Org.*, 1953, 7, 299; 1954, 8, 216, 313; 1956, 10, 28; 1957, 11, 231; 1958, 12, 102; *WHO Chronicle*, 1959, 13, 105, 152; 1960, 14, 168, 244; 1961, 15, 314; 1962, 16, 385; 1963, 17, 389; 1964, 18, 433; 1965, 19, 446; 1966, 20, 216; 1967, 21, 70, 478; 1968, 22, 112, 407; 1969, 23, 183, 418; 1970, 24, 119, 413; 1971, 25, 123, 415; 1972, 26, 121, 414; 1973, 27, 120, 330; 1974, 28, 133; supplement to *WHO Chronicle*, 1974, Vol. 28, No. 9.

Lists of recommended international nonproprietary names were published in *Chron. Wld Hlth Org.*, 1955, 9, 185; *WHO Chronicle*, 1959, 13, 106, 463; 1962, 16, 101; 1965, 19, 165, 206, 249; 1966, 20, 421; 1967, 21, 538; 1968, 22, 463; 1969, 23, 490; 1970, 24, 526; 1971, 25, 476; 1972, 26, 476; 1973, 27, 453; supplement to *WHO Chronicle*, 1974, Vol. 28, No. 10.

All names from lists 1–25 of proposed international nonproprietary names, together with a molecular formula index, will be found in: World Health Organization (1971) *International nonproprietary names for pharmaceutical substances: Cumulative list No. 3, 1971*, Geneva, 189 pages (price: Sw. fr. 24.—). This publication may be obtained from the sales agents listed on the back cover of the *WHO Chronicle* or from: World Health Organization, Distribution and Sales Service, 1211 Geneva 27, Switzerland.

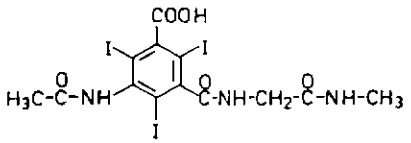
acidum etodolicum
etodolic acid

1,8-diethyl-1,3,4,9-tetrahydropyrano[3,4-*b*]indole-1-acetic acid
$C_{17}H_{21}NO_3$



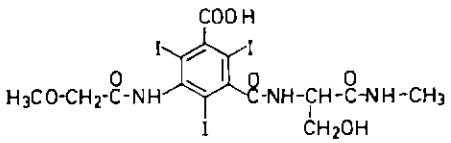
acidum ioglicicum
ioglicic acid

5-acetamido-2,4,6-triiodo-*N*-[(methylcarbamoyl)methyl]isophthalamic acid
$C_{13}H_{12}I_3N_3O_5$



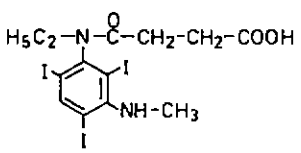
acidum iosericum
ioseric acid

N-[2-hydroxy-1-(methylcarbamoyl)ethyl]-2,4,6-triiodo-5-(2-methoxyacetamido)isophthalamic acid
$C_{15}H_{16}I_3N_3O_7$

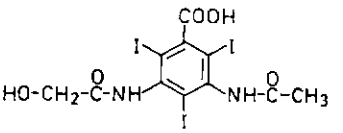


acidum iosumeticum
iosumetic acid

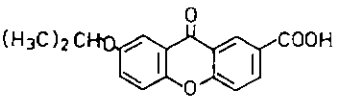
N-ethyl-2′,4′,6′-triiodo-3′-(methylamino)succinanilic acid
$C_{13}H_{15}I_3N_2O_3$



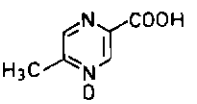
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae*
acidum ioxotrizoicum ioxotrizoic acid	3-acetamido-5-glycolamido-2,4,6-triiodobenzoic acid $C_{11}H_9I_3N_2O_5$



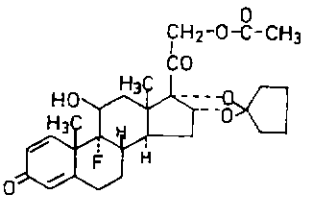
acidum xanoxicum xanoxic acid	7-isopropoxy-9-oxoxanthene-2-carboxylic acid $C_{17}H_{14}O_5$



acipimoxum acipimox	5-methylpyrazinecarboxylic acid 4-oxide $C_6H_6N_2O_3$

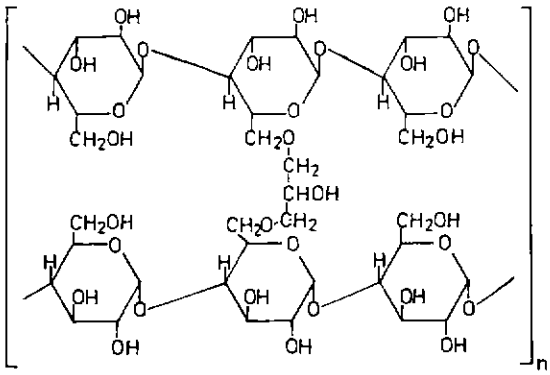


amcinonidum amcinonide	9-fluoro-11β,16α,17,21-tetrahydroxypregna-1,4-diene-3,20-dione cyclic 16,17-acetal with cyclopentanone, 21-acetate $C_{26}H_{35}FO_7$



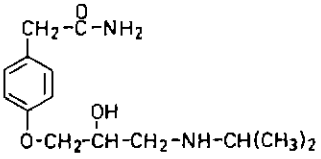
amilomerum
amilomer

starch reaction product with epichlorohydrin



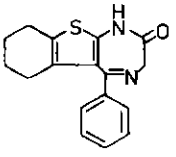
atenololum
atenolol

2-[*p*-[2-hydroxy-3-(isopropylamino)propoxy]phenyl]acetamide
$C_{14}H_{22}N_2O_3$



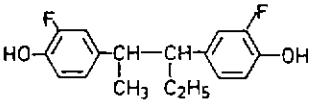
bentazepamum
bentazepam

1,3,6,7,8,9-hexahydro-5-phenyl-2*H*-[1]benzothieno[2,3-*e*]-1,4-diazepin-2-one
$C_{17}H_{16}N_2OS$



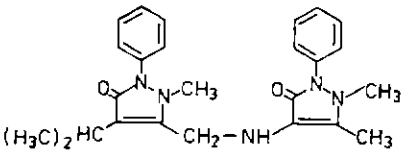
bifluranolum
bifluranol

erythro-4,4′-(1-ethyl-2-methylethylene)bis[2-fluorophenol]
$C_{17}H_{18}F_2O_2$



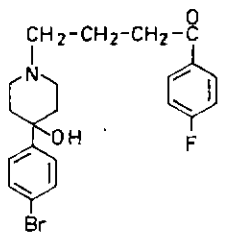
bisfenazonum
bisfenazone

3-[[(2,3-dimethyl-5-oxo-1-phenyl-3-pyrazolin-4-yl)amino]methyl]-4-isopropyl-2-methyl-1-phenyl-3-pyrazolin-5-one
$C_{25}H_{29}N_5O_2$



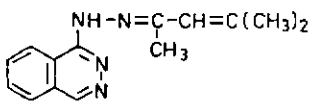
bromperidolum
bromperidol

4-[4-(*p*-bromophenyl)-4-hydroxypiperidino]-4′-fluorobutyrophenone
$C_{21}H_{23}BrFNO_2$



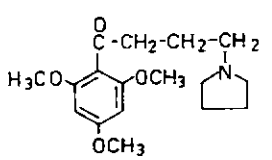
budralazinum
budralazine

4-methyl-3-penten-2-one (1-phthalazinyl)hydrazone
$C_{14}H_{16}N_4$



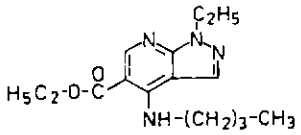
buflomedilum
buflomedil

2′,4′,6′-trimethoxy-4-(1-pyrrolidinyl)butyrophenone
$C_{17}H_{25}NO_4$



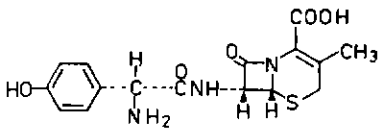
cartazolatum
cartazolate

ethyl 4-(butylamino)-1-ethyl-1*H*-pyrazolo[3,4-*b*]pyridine-5-carboxylate
$C_{15}H_{22}N_4O_2$



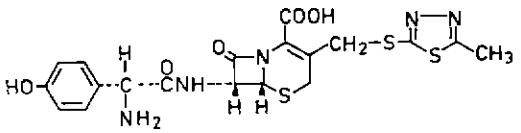
cefadroxilum
cefadroxil

(6*R*,7*R*)-7-[(*R*)-2-amino-2-(*p*-hydroxyphenyl)acetamido]-3-methyl-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid
$C_{16}H_{17}N_3O_5S$



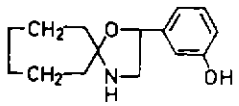
cefaparolum
cefaparole

(6*R*,7*R*)-7-[(*R*)-2-amino-2-(*p*-hydroxyphenyl)acetamido]-3-[[(5-methyl-1,3,4,-thiadiazol-2-yl)thio]methyl]-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid
$C_{19}H_{19}N_5O_5S_3$



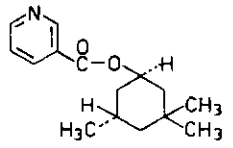
ciclafrinum
ciclafrine

m-1-oxa-4-azaspiro[4.6]undec-2-ylphenol
$C_{15}H_{21}NO_2$



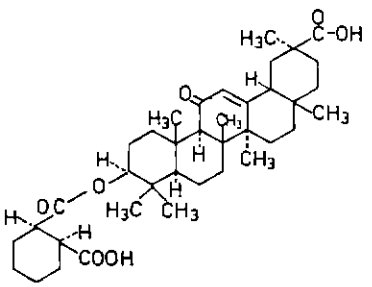
ciclonicatum
ciclonicate

trans-3,3,5-trimethylcyclohexyl nicotinate
$C_{15}H_{21}NO_2$



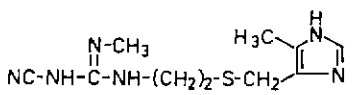
cicloxolonum
cicloxolone

3β-hydroxy-11-oxoolean-12-en-30-oic acid hydrogen *cis*-1,2-cyclohexanedicarboxylate
$C_{38}H_{56}O_7$



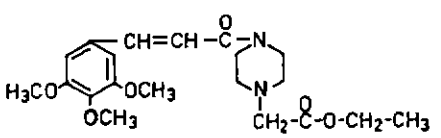
cimetidinum
cimetidine

1-cyano-2-methyl-3-[2-[[(5-methylimidazol-4-yl)methyl]thio]ethyl]-guanidine
$C_{10}H_{16}N_6S$



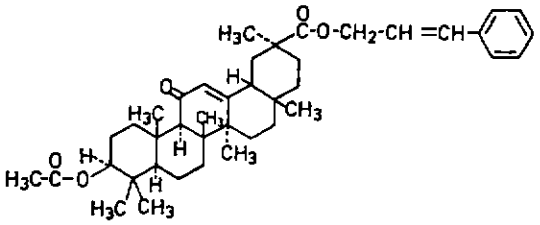
cinepazetum
cinepazet

ethyl 4-(3,4,5-trimethoxycinnamoyl)-1-piperazineacetate
$C_{20}H_{28}N_2O_6$



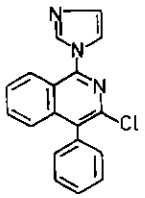
cinoxolonum
cinoxolone

cinnamyl 3β-hydroxy-11-oxoolean-12-en-30-oate acetate
$C_{41}H_{56}O_5$



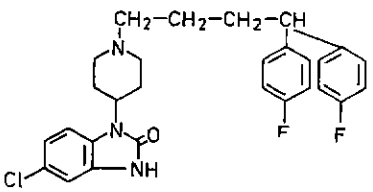
climiqualinum
climiqualine

3-chloro-1-imidazol-1-yl-4-phenylisoquinoline
$C_{18}H_{12}ClN_3$



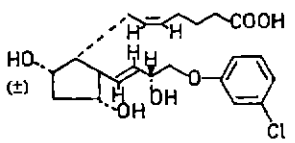
clopimozidum
clopimozide

1-[1-[4,4-bis(*p*-fluorophenyl)butyl]-4-piperidyl]-5-chloro-2-benzimidazolinone
$C_{28}H_{28}ClF_2N_3O$



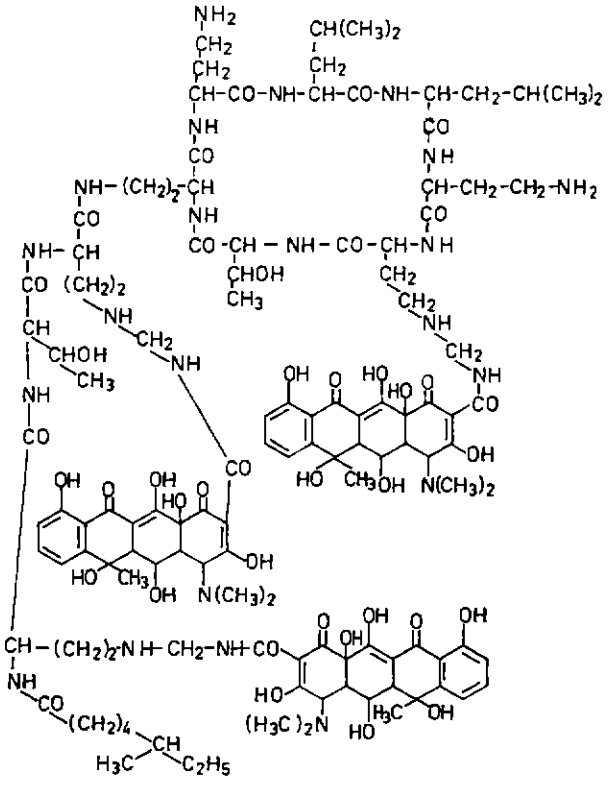
cloprostenolum
cloprostenol

(±)-(*Z*)-7-[(1*R**,2*R**,3*R**,5*S**)-2-[(*E*)-(3*R**)-4-(*m*-chlorophenoxy)-3-hydroxy-1-butenyl]-3,5-dihydroxycyclopentyl]-5-heptenoic acid
$C_{22}H_{29}ClO_6$



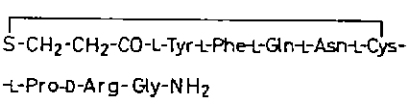
colimecyclinum
colimecycline

reaction product of one molecule of colistin with three molecules of oxytetracycline in presence of formaldehyde
N,N',N''-tris[[4-(dimethylamino)-1,4,4a,5,5a,6,11,12a-octahydro-3,5,6,10,12,12a-hexahydroxy-6-methyl-1,11-dioxo-2-naphthacenecarboxamido]methyl]polymyxin E (nominal)
$C_{122}H_{172}N_{22}O_{40}$ (nominal)



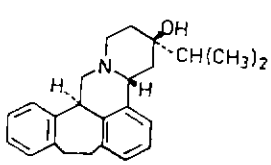
desmopressinum
desmopressin

1-(3-mercaptopropionic acid)-8-D-argininevasopressin
$C_{46}H_{64}N_{14}O_{12}S_2$



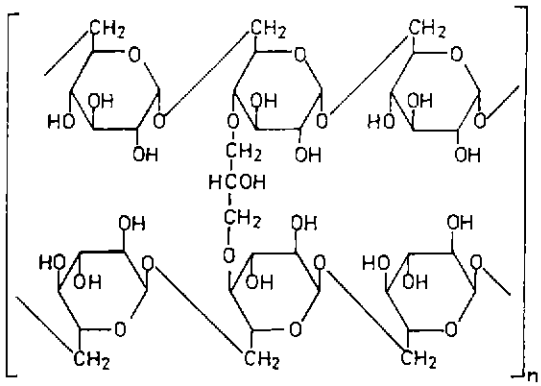
dexclamolum
dexclamol

(+)-2,3,4,4aβ,8,9,13bα,14-octahydro-3α-isopropyl-1*H*-benzo[6,7]cyclohepta-[1,2,3-*de*]pyrido[2,1-*a*]isoquinolin-3-ol
$C_{24}H_{29}NO$



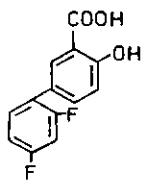
dextranomerum
dextranomer

dextran reaction product with epichlorohydrin



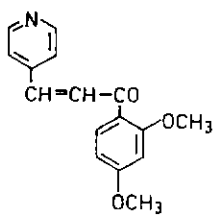
diflunisalum
diflunisal

2′,4′-difluoro-4-hydroxy-3-biphenylcarboxylic acid
$C_{13}H_8F_2O_3$



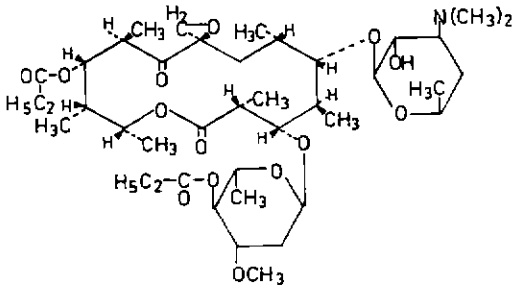
dilmefonum
dilmefone

2′,4′-dimethoxy-3-(4-pyridyl)acrylophenone
$C_{16}H_{15}NO_3$



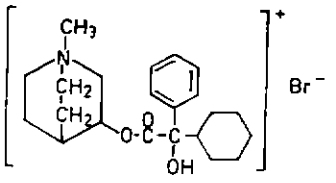
diproleandomycinum
diproleandomycin

oleandomycin 4″,11-dipropionate
$C_{41}H_{69}NO_{14}$



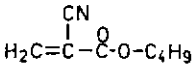
droclidinii bromidum
droclidinium bromide

3-hydroxy-1-methylquinuclidinium bromide α-phenylcyclohexaneglycolate
$C_{22}H_{32}BrNO_3$



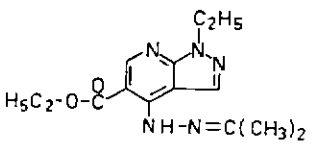
e-bucrilatum
ucrilate

butyl 2-cyanoacrylate
$C_8H_{11}NO_2$



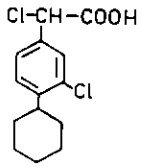
etazolatum
etazolate

ethyl 1-ethyl-4-(isopropylidenehydrazino)-1*H*-pyrazolo[3,4-*b*]pyridine-5-carboxylate
$C_{14}H_{19}N_5O_2$



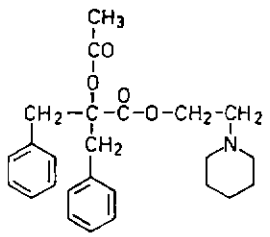
fencloracum
fenclorac

chloro(3-chloro-4-cyclohexylphenyl)acetic acid
$C_{14}H_{16}Cl_2O_2$



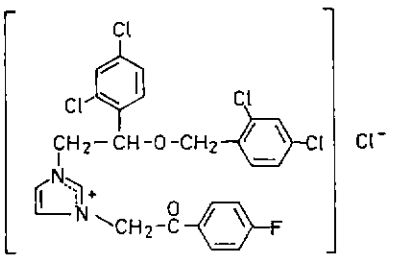
fenperatum
fenperate

2-piperidinoethyl α-benzyl-α-hydroxyhydrocinnamate acetate (ester)
$C_{25}H_{31}NO_4$



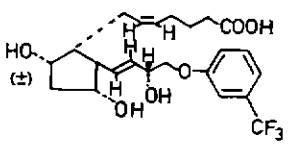
fludazonii chloridum
fludazonium chloride

1-[2,4-dichloro-β-[(2,4-dichlorobenzyl)oxy]phenethyl]-3-(*p*-fluorophenacyl)imidazolium chloride
$C_{26}H_{20}Cl_5FN_2O_2$



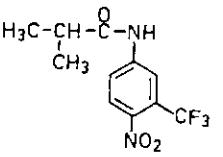
fluprostenolum
fluprostenol

(±)-(*Z*)-7-[(1*R**,2*R**,3*R**,5*S**)-3,5-dihydroxy-2-[(*E*)-(3*R**)-3-hydroxy-4-[(α,α,α,-trifluoro-*m*-tolyl)oxy]-1-butenyl]cyclopentyl]-5-heptenoic acid
$C_{23}H_{29}F_3O_6$



flutamidum
flutamide

α,α,α-trifluoro-2-methyl-4′-nitro-*m*-propionotoluidide
$C_{11}H_{11}F_3N_2O_3$

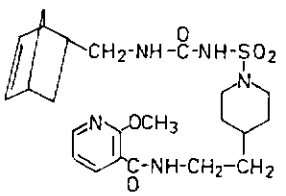


gallii (^{67}Ga) citras
gallium (^{67}Ga) citrate

gallium - ^{67}*Ga* citrate (1 : 1)

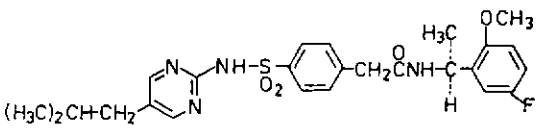
gliamilidum
gliamilide

endo-1-[[4-[2-(2-methoxynicotinamido)ethyl]piperidino]sulfonyl]-3-(5-norbornen-2-ylmethyl)urea
$C_{23}H_{33}N_5O_5S$



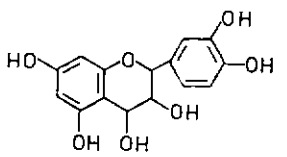
pliflumidum
umide

(-)-(*S*)-*N*-(5-fluoro-2-methoxy-α-methylbenzyl)-2-[*p*-[(5-isobutyl-2-pyrimidinyl)sulfamoyl]phenyl]acetamide
$C_{25}H_{29}FN_4O_4S$



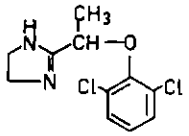
leucocianidolum
leucocianidol

3,3′,4,4′,5,7-flavanhexol
$C_{15}H_{14}O_7$



lofexidinum
lofexidine

2-[1-(2,6-dichlorophenoxy)ethyl]-2-imidazoline
$C_{11}H_{12}Cl_2N_2O$

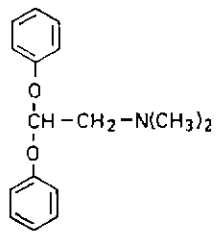


macrosalbum (^{99m}Tc)
macrosalb (^{99m}Tc)

technetium (^{99m}Tc) labelled macroaggregated human serum albumin

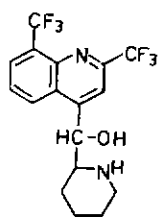
medifoxaminum
medifoxamine

(dimethylamino)acetaldehyde diphenyl acetal
$C_{16}H_{19}NO_2$



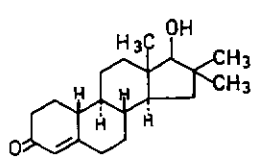
mefloquinum
mefloquine

DL-*erythro*-α-2-piperidyl-2,8-bis(trifluoromethyl)-4-quinolinemethanol
$C_{17}H_{16}F_6N_2O$



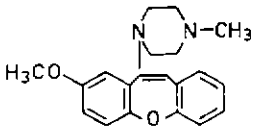
metogestum
metogest

17β-hydroxy-16,16-dimethylestr-4-en-3-one
$C_{20}H_{30}O_2$



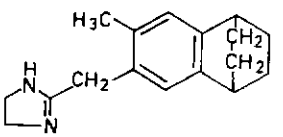
metoxepinum
metoxepin

1-(8-methoxydibenz[*b,f*]oxepin-10-yl)-4-methylpiperazine
$C_{20}H_{22}N_2O_2$



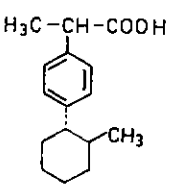
metrafazolinum
metrafazoline

2-[(1,2,3,4-tetrahydro-7-methyl-1,4-ethanonaphthalen-6-yl)methyl]-2-imidazoline
$C_{17}H_{22}N_2$



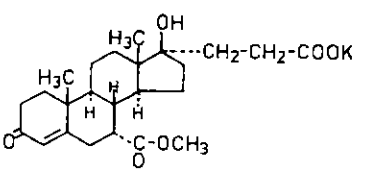
mexoprofenum
mexoprofen

p-(*trans*-2-methylcyclohexyl)hydratropic acid
$C_{16}H_{22}O_2$



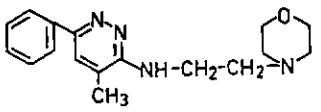
mexrenoatum kalicum
mexrenoate potassium

7-methyl 21-potassium 17-hydroxy-3-oxo-17α-pregn-4-ene-7α,21-dicarboxylate dihydrate
$C_{24}H_{33}KO_6 \cdot 2H_2O$



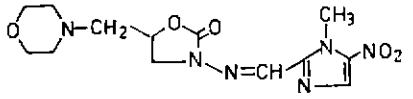
minaprinum
minaprine

4-[2-[(4-methyl-6-phenyl-3-pyridazinyl)amino]ethyl]morpholine
$C_{17}H_{22}N_4O$



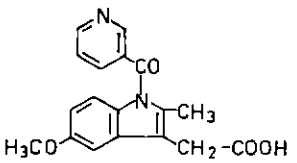
moxnidazolum
moxnidazole

3-[[(1-methyl-5-nitroimidazol-2-yl)methylene]amino]-5-(morpholinomethyl)-2-oxazolidinone
$C_{13}H_{18}N_6O_5$



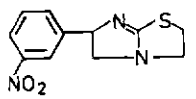
niometacinum
niometacin

5-methoxy-2-methyl-1-nicotinoylindole-3-acetic acid
$C_{18}H_{16}N_2O_4$



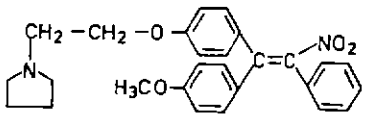
nitramisolum
nitramisole

(±)-2,3,5,6-tetrahydro-6-(*m*-nitrophenyl)imidazo[2,1-*b*]thiazole
$C_{11}H_{11}N_3O_2S$



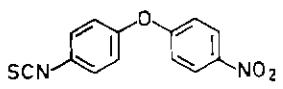
nitromifenum
nitromifene

1-[2-[*p*-[α-(*p*-methoxyphenyl)-β-nitrostyryl]phenoxy]ethyl]pyrrolidine
$C_{27}H_{28}N_2O_4$



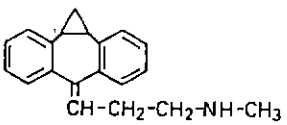
nitroscanatum
nitroscanate

p-(*p*-nitrophenoxy)phenyl isothiocyanate
$C_{13}H_8N_2O_3S$



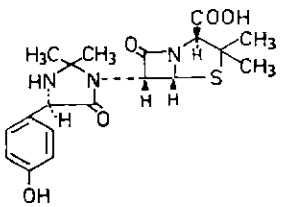
octriptylinum
octriptyline

1a,10b-dihydro-*N*-methyldibenzo[*a*,*e*]cyclopropa[*c*]cycloheptene-$\Delta^{6(1H),\gamma}$-propylamine
$C_{20}H_{21}N$



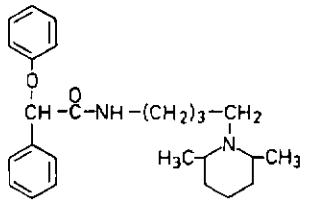
oxetacillinum
oxetacillin

(2*S*,5*R*,6*R*)-6-[(*R*)-[4-(*p*-hydroxyphenyl)-2,2-dimethyl-5-oxo-1-imidazolidinyl]]-3,3-dimethyl-7-oxo-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid
$C_{19}H_{23}N_3O_5S$



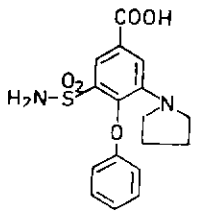
oxiramidum
oxiramide

N-[4-(2,6-dimethylpiperidino)butyl]-2-phenoxy-2-phenylacetamide
$C_{25}H_{34}N_2O_2$



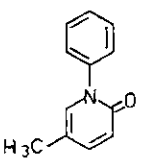
piretanidum
piretanide

4-phenoxy-3-(1-pyrrolidinyl)-5-sulfamoylbenzoic acid
$C_{17}H_{18}N_2O_5S$



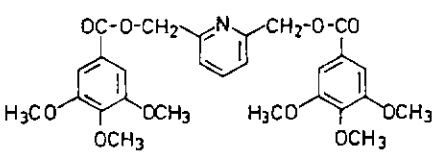
pirfenidonum
pirfenidone

5-methyl-1-phenyl-2(1*H*)-pyridone
$C_{12}H_{11}NO$



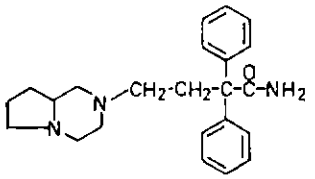
pirozadilum
pirozadil

2,6-pyridinediyldimethylene bis(3,4,5-trimethoxybenzoate)
$C_{27}H_{29}NO_{10}$



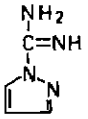
pirolazamidum
pirolazamide

hexahydro-α,α-diphenylpyrrolo[1,2-*a*]pyrazine-2(1*H*)-butyramide
$C_{23}H_{29}N_3O$



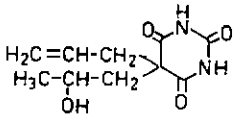
praxadinum
praxadine

pyrazole-1-carboxamidine
$C_4H_6N_4$



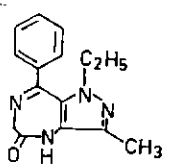
proxibarbalum
proxibarbal

5-allyl-5-(2-hydroxypropyl)barbituric acid
$C_{10}H_{14}N_2O_4$



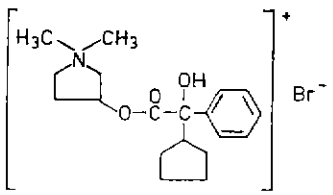
ripazepamum
ripazepam

1-ethyl-4,6-dihydro-3-methyl-8-phenylpyrazolo[4,3-*e*][1,4]diazepin-5(1*H*)-one
$C_{15}H_{16}N_4O$



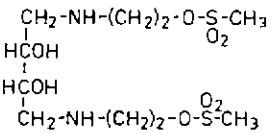
ritropirronii bromidum
ritropirronium bromide

erythro-3-hydroxy-1,1-dimethylpyrrolidinium bromide α-cyclopentylmandelate
$C_{19}H_{28}BrNO_3$



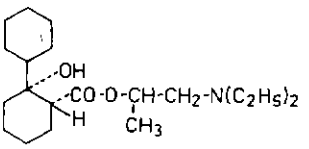
ritrosulfanum
ritrosulfan

1,4-dideoxy-1,4-bis[(2-hydroxyethyl)amino]erythritol 1,4-dimethanesulfonate (ester)
$C_{10}H_{24}N_2O_8S_2$



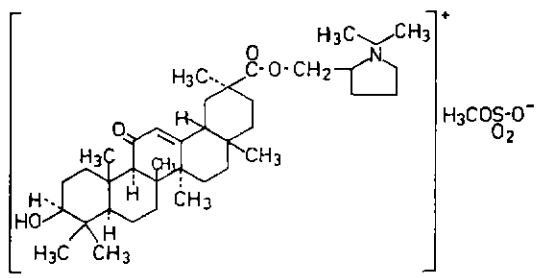
rociverinum
rociverine

2-(diethylamino)-1-methylethyl *cis*-1-hydroxy[bicyclohexyl]-2-carboxylate
$C_{20}H_{37}NO_3$



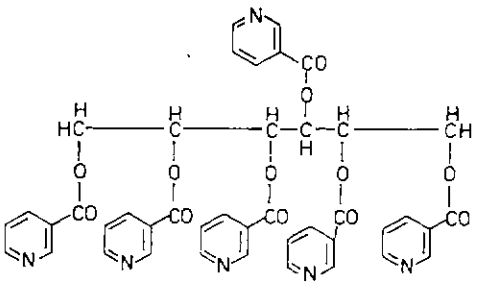
roxolonii metilsulfas
roxolonium metilsulfate

2-(hydroxymethyl)-1,1-dimethylpyrrolidinium methyl sulfate 3β-hydroxy-11-oxoolean-12-en-30-oate
$C_{38}H_{63}NO_8S$



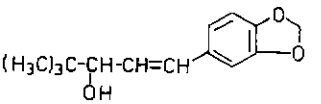
sorbinicatum
sorbinicate

D-glucitol hexanicotinate
$C_{42}H_{32}N_6O_{12}$



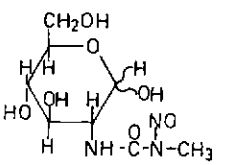
stiripentolum
stiripentol

4,4-dimethyl-1-[(3,4-methylenedioxy)phenyl]-1-penten-3-ol
$C_{14}H_{18}O_3$



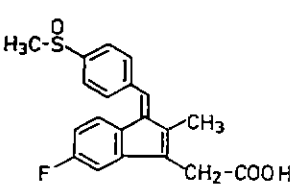
streptozocinum
streptozocin

2-deoxy-2-(3-methyl-3-nitrosoureido)-D-glucopyranose
$C_8H_{15}N_3O_7$



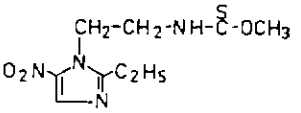
sulindacum
sulindac

(*Z*)-5-fluoro-2-methyl-1-[*p*-(methylsulfinyl)benzylidene]indene-3-acetic acid
$C_{20}H_{17}FO_3S$



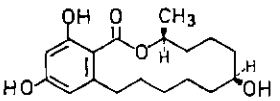
sulnidazolum
sulnidazole

O-methyl [2-(2-ethyl-5-nitroimidazol-1-yl)ethyl]thiocarbamate
$C_9H_{14}N_4O_3S$



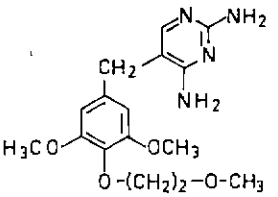
taleranolum
taleranol

(3*S*,7*S*)-3,4,5,6,7,8,9,10,11,12-decahydro-7,14,16-trihydroxy-3-methyl-1*H*-2-benzoxacyclotetradecin-1-one
$C_{18}H_{26}O_5$



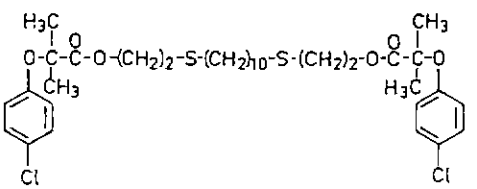
tetroxoprimum
tetroxoprim

2,4-diamino-5-[3,5-dimethoxy-4-(2-methoxyethoxy)benzyl]pyrimidine
$C_{16}H_{22}N_4O_4$



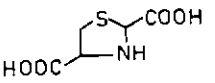
tiafibratum
tiafibrate

2-(*p*-chlorophenoxy)-2-methylpropionic acid diester with 2,2'-(decamethylenedithio)diethanol
$C_{34}H_{48}Cl_2O_6S_2$



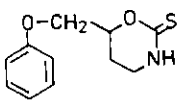
tidiacicum
tidiacic

2,4-thiazolidinedicarboxylic acid
$C_5H_7NO_4S$



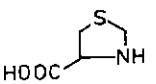
tifemoxonum
tifemoxone

tetrahydro-6-(phenoxymethyl)-2*H*-1,3-oxazine-2-thione
$C_{11}H_{13}NO_2S$



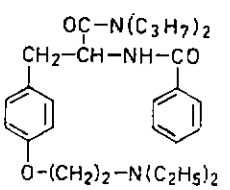
timonacicum
timonacic

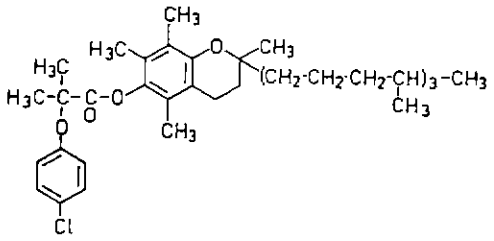
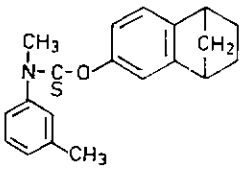
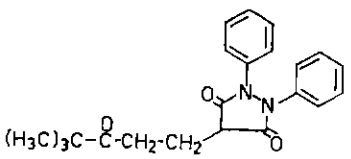
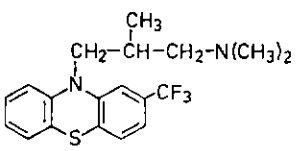
4-thiazolidinecarboxylic acid
$C_4H_7NO_2S$



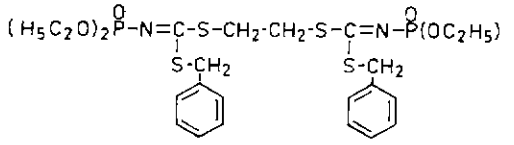
tiropramidum
tiropramide

DL-α-benzamido-*p*-[2-(diethylamino)ethoxy]-*N*,*N*-dipropylhydrocinnamamide
$C_{28}H_{41}N_3O_3$



Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae*
tocofibratum tocofibrate	2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-6-chromanyl 2-(*p*-chlorophenoxy)-2-methylpropionate $C_{39}H_{59}ClO_4$ 
tolciclatum tolciclate	*O*-(1,2,3,4-tetrahydro-1,4-methanonaphthalen-6-yl) *m,N*-dimethylthiocarbanilate $C_{20}H_{21}NOS$ 
tribuzonum tribuzone	4-(4,4-dimethyl-3-oxopentyl)-1,2-diphenyl-3,5-pyrazolidinedione $C_{22}H_{24}N_2O_3$ 
trifluomeprazinum trifluomeprazine	10-[3-(dimethylamino)-2-methylpropyl]-2-(trifluoromethyl)phenothiazine $C_{19}H_{21}F_3N_2S$ 

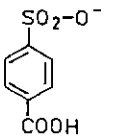
Proposed International Nonproprietary Name (Latin, English)	*Chemical Name or Description, Molecular and Graphic Formulae*
zilantelum zilantel	phosphonodithioimidocarbonic acid ethylene dibenzyl *P,P,P',P'*-tetraethyl ester $C_{26}H_{38}N_2O_6P_2S_4$



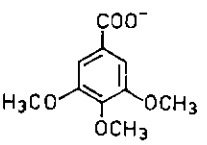
...mes for Radicals and Groups

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.

p-sulfobenzoate	carbesilate



3,4,5-trimethoxybenzoate	megallate



AMENDMENTS TO PREVIOUS LISTS

Vol. 26, No. 9

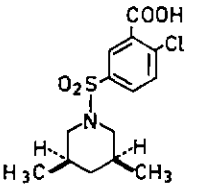
Proposed International Nonproprietary Names (Prop. INN): List 28

p. 425 *delete*	*insert*
macrisalbum (^{131}I) macrisalb (^{131}I)	macrosalbum (^{131}I) macrosalb (^{131}I)

Proposed International Nonproprietary Names (Prop. INN): List 30

p. 373 acidum tibricum
tibric acid

replace chemical name and graphic formula by the following :
2-chloro-5-[(*cis*-3,5-dimethylpiperidino)sulfonyl]benzoic acid



p. 380 *delete*

dexnorgestrelum
dexnorgestrel

D-13-ethyl-17-hydroxy-18,19-dinor-17α-pregn-4-en-20-yn-3-one
$C_{21}H_{28}O_2$

insert

levonorgestrelum
levonorgestrel

D-(−)-13-ethyl-17-hydroxy-18,19-dinor-17α-pregn-4-en-20-yn-3-one
$C_{21}H_{28}O_2$

Proposed International Nonproprietary Names (Prop. INN): List 31

135 butorphanolum
butorphanol

replace chemical name by the following :
(−)-17-(cyclobutylmethyl)morphinan-3,14-diol

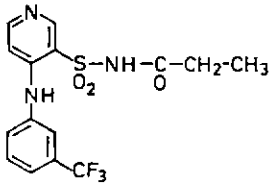
147 oxilorphanum
oxilorphan

replace chemical name by the following :
(−)-17-(cyclopropylmethyl)morphinan-3,14-diol

Proposed International Nonproprietary Names (Prop. INN): List 32

p. 8 galosemidum
galosemide

replace chemical name and graphic formula by the following :
N-[[4-(α,α,α-trifluoro-*m*-toluidino)-3-pyridyl]sulfonyl]propionamide



p. 22 polysorbatum
polysorbate

In all instances, under the numbered polysorbates, replace :
polyethylene 20 sorbitan *by* polyoxyethylene 20 sorbitan
replace molecular formula for polysorbate 65 by :
$C_{100}H_{194}O_{28}$

p. 34 *delete*

cisclomifenum cisclomifene	2-[*p*-(2-chloro-*cis*-1,2-diphenylvinyl)phenoxy]triethylamine $C_{26}H_{28}ClNO$

p. 53 *insert after the entry " emylcamatum "*

enclomifenum enclomifene	2-[*p*-(2-chloro-*trans*-1,2-diphenylvinyl)phenoxy]triethylamine *or* (*E*)-2-[*p*-(2-chloro-1,2-diphenylvinyl)phenoxy]triethylamine (previous INN : cisclomifene) $C_{26}H_{28}ClNO$

p. 132 *delete*

transclomifenum transclomifene	2-[*p*-(2-chloro-*trans*-1,2-diphenylvinyl)phenoxy]triethylamine $C_{26}H_{28}ClNO$

p. 139 *insert after the entry " zoxazolaminum "*

zuclomifenum zuclomifene	2-[*p*-(2-chloro-*cis*-1,2-diphenylvinyl)phenoxy]triethylamine *or* (*Z*)-2-[*p*-(2-chloro-1,2-diphenylvinyl)phenoxy]triethylamine (previous INN : transclomifene) $C_{26}H_{28}ClNO$

p. 119

rufocromomycinum rufocromomycin	*replace the present definition by the following :* antibiotic obtained from cultures of *Streptomyces rufochromogenus* or *Streptomyces flocculus*, or the same substance produced by any other means ; 5-amino-6-(7-amino-5,8-dihydro-6-methoxy-5,8-dioxo-2-quinolyl)-4-(2-hydroxy-3,4-dimethoxyphenyl)-3-methylpicolinic acid $C_{25}H_{22}N_4O_8$

p. 123 *delete*

streptonigrinum streptonigrin	5-amino-6-(7-amino-5,8-dihydro-6-methoxy-5,8-dioxo-2-quinolyl)-4-(2-hydroxy-3,4-dimethoxyphenyl)-3-methylpicolinic acid $C_{25}H_{22}N_4O_8$

p. 139

zeranolum zeranol	*replace chemical name by the following :* (3*S*,7*R*)-3,4,5,6,7,8,9,10,11,12-decahydro-7,14,16-trihydroxy-3-methyl-1*H*-2-benzoxacyclotetradecin-1-one

Annex

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*.

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*.

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. Names should be distinctive in sound and spelling. They should not be inconveniently long and should not be liable to confusion with names already in common use.

2. The name 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 anatom-

* Text revised by the Expert Committee on Nonproprietary Names for Pharmaceutical Substances (unpublished reports WHO/Pharm/67.443, WHO/Pharm/68.447, and WHO/Pharm/70.458).

ical, physiological, pathological or therapeutic suggestion should be avoided.

The above primary principles are to be implemented by utilization of the following secondary principles.

3. In devising the name of the first substance in a new pharmacological group (the parent substance), consideration should be given to the possibility of devising suitable names for related substances belonging to the new group.

4. In devising a name from the systematic chemical name of a substance, syllables such as " methylhydro ", " methoxy ", and " chlor " should preferably be abbreviated, for example, to edro ", " meto ", and " clo "; the derived name should not be chemically misleading.

5. In devising names 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 ". The salts of acids having two-word names such as " nicotinic acid " should be named in the usual style, e.g., " sodium nicotinate ".

6. Names 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). Exceptions may have to be made for those cases in which pharmacological activity may reside in both parts of the salt or ester.

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.

7. The use of an isolated letter or number should be avoided; hyphenated construction is also undesirable.

8. To facilitate translation and pronunciation " f " should preferably be used instead of " ph ", " t " instead of " th ", " e " instead of " ae " or " oe ", and " i " instead of " y ".

9. 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.

10. Group relationship in names (see item 2) should preferably be shown by using common syllables in the following list. Where a syllable or a group of syllables is shown without any hyphens it may be used anywhere in the name. The syllable, or group of syllables, should, if possible, be used only for such substances.

Subsidiary group relationships should be shown by devising names which show similarities to and are analogous with a previously named substance, the parent substance.

At the end of the list are general chemical syllables. Should they come into conflict with other suggested syllables, the suffix conveying the best information should be used.

Latin	*English*	*French*	
-actidum	-actide	actide	synthetic polypeptides with a corticotrophin-like action
-andr- or -stan- or -ster-	-andr- or -stan- or -ster-	-andr- or -stan- or -ster-	steroids, androgenic
-arolum	-arol	-arol	anticoagulants of the coumarin type
-bamatum	-bamate	-bamate	tranquillizers of the propanediol and pentanediol series
barb	barb	barb	barbituric acids, hypnotic activity
bol	bol	bol	anabolic steroids
-cainum	-caine	-caine	local anaesthetics
cef-	cef-	céf-	antibiotics with cefalosporanic acid nucleus
-cillinum	-cillin	-cilline	penicillins: derivatives of 6-amino-penicillanic acid
cort	cort	cort	steroids, glucocorticoids and mineralocorticoids, other than prednisolone derivatives
-crinum	-crine	-crine	acridine derivatives
-curium	-curium	-curium	curare-like drugs
-cyclinum	-cycline	-cycline	antibiotics, tetracycline derivatives
-estr-	-estr-	-estr-	estrogenic drugs
-forminum	-formin	-formine	guanidine oral antidiabetics
gest	gest	gest	steroids, progestative
gli-	gli-	gli-	sulfonamide oral antidiabetics
io-	io-	io-	iodine-containing constrast media
-moxinum	-moxin	-moxine	monoamine oxidase inhibitors
-mycinum	-mycin	-mycine	antimicrobial antibiotics, produced by *Streptomyces* strains
nifur-	nifur-	nifur-	5-nitrofuran derivates
-onidum	-onide	-onide	steroids for topical use: acetal derivatives
-orexum	-orex	-orex	anorexigenic agents
-praminum	-pramine	-pramine	dibenzazepine, compounds of the imipramine type
prost	prost	prost	prostaglandins
-serpinum	-serpine	-serpine	derivatives of *Rauwolfia* alkaloids
sulfa-	sulfa-	sulfa-	sulfonamides, used as antimicrobials
-terolum	-terol	-térol	bronchodilators: phenethylamine derivatives
-tizidum	-tizide	-tizide	diuretics which are thiazide derivatives
-toinum	-toin	-toïne	antiepileptics which are hydantoin derivatives
-verinum	-verine	-vérine	spasmolytics with a papaverine-like action
-inum	-ine	-ine	alkaloids and organic bases
-onum	-one	-one	ketones
-ium	-ium	-ium	quaternary ammonium compounds