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 rames are under consideration he 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 33²

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 C₁₅H₂₁Cl₂N₃O

acesulfamum ====ulfame 6-methyl-1,2,3-oxathiazin-4(3*H*)-one 2,2-dioxide C₄H₅NO₄S

¹ See Annex, p. 28.

² Other lists of proposed international non-proprietary names can be found in Chron. Wld Hith 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 non-

Lists of recommended international nonproprietary names were published in Chronicle. Wid Hith 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 C₁₇H₂₁NO₃

acidum ioglicicum ioglicic acid 5-acetamido-2,4,6-triiodo-*N*-[(methylcarbamoyl)methyl]isophthalamic acid C13H12l3N3O5

acidum iosericum ioseric acid N-[2-hydroxy-1-(methylcarbamoyl)ethyl]-2,4,6-triiodo-5-(2-methoxyacetamido)isophthalamic acid СтьНтвІзNзО7

acidum iosumeticum iosumetic acid

N-ethyl-2',4',6'-trilodo-3'-(methylamino)succinanilic acid C₁₃H₁₅I₃N₂O₃

acidum ioxotrizoicum ioxotrizoic acid

3-acetamido-5-glycolamido-2,4,6-triiodobenzoic acid C₁1 HelaN2O₅

acidum xanoxicum xanoxic acid

7-isopropoxy-9-oxoxanthene-2-carboxylic acid C₁₇H₁₄O₅

acipimoxum acipimox 5-methylpyrazinecarboxylic acid 4-oxide C6H6N2O3

amcinonidum amcinonide 9-fluoro-11 β ,16 α ,17,21-tetrahydroxypregna-1,4-diene-3,20-dione cyclic 16,17-acetal with cyclopentanone, 21-acetate C₂₆H₃₅FO₇

amilomerum amilomer starch reaction product with epichlorohydrin

atenololum atenolol 2-[p-[2-hydroxy-3-(isopropylamino)propoxy]phenyl]acetamide C14H22N2O3

bentazepamum bentazepam 1,3,6,7,8,9-hexahydro-5-phenyl-2*H*-[1]benzothieno[2,3-*e*]-1,4-diazepin-2-one C₁₇H₁₆N₂OS

bifluranolum bifluranol erythro-4,4'-(1-ethyl-2-methylethylene)bis[2-fluorophenol]

bisfenazonum bisfenazone

į

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

bromperidolum bromperidol 4-[4-(p-bromophenyl)-4-hydroxypiperidino]-4'-fluorobutyrophenone C21H23BrFNO2

budralazinum budralazine 4-methyl-3-penten-2-one (1-phthalazinyl)hydrazone C14H16N4

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

cartazolatum cartazolate ethyl 4-(butylamino) -1-ethyl-1H-pyrazolo [3,4-b] pyridine-5-carboxylate C₁₅H₂₂N₄O₂

cefadroxilum cefadroxil (6R,7R)-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 $C_{16}H_{17}N_{3}O_{5}S$

cefaparolum cefaparole $(6R,7R)-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 C₁₅H₂₁NO₂

ciclonicatum ciclonicate trans-3,3,5-trimethylcyclohexyl nicotinate C₁₅H₂₁NO₂

cicloxolonum cicloxolone 3β -hydroxy-11-oxoolean-12-en-30-oic acid hydrogen cis-1,2-cyclohexanedicarboxylate C38H5sO7

cimetidinum

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

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

cinoxolonum cinoxolone cinnamyl 3β-hydroxy-11-oxoolean-12-en-30-oate acetate C41H56O5

climiqualinum climiqualine 3-chloro-1-imidazol-1-yl-4-phenylisoquinoline C18H12ClN3

clopimozidum clopimozide 1-[1-[4,4-bis(p-fluorophenyi)butyl]-4-piperidyl]-5-chloro-2-benzimidazolinone C28H28CIF2N3O

cloprostenolum cloprostenol (\pm)-(Z)-7-[(1R*,2R*,3R*,5S*)-2-[(E)-(3R*)-4-(m-chlorophenoxy)-3-hydroxy-1-butenyl]-3,5-dihydroxycyclopentyl]-5-heptenoic acid C₂₂H₂₉ClO₆

colimecyclinum colimecycline

reaction product of one molecule of colistin with three molecules of oxytetracycline in presence of formaldehyde

 $\dot{N}.N'.N''$ -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)

C122H172N22O40 (nominal)

desmopressinum desmopressin

1-(3-mercaptopropionic acid)-8-D-argininevasopressin C46H64N14O12S2

dexclamolum dexclamol

(+)-2,3,4,4aβ,8,9,13ba,14-octahydro-3α-isopropyl-1*H*-benzo [6,7]cyclohepta-[1,2,3-*de*]pyrido [2,1-*a*]isoquinolin-3-ol C₂4H₂9NO

dextranomerum dextranomer

dextran reaction product with epichlorohydrin

diflunisalum diflunisal 2',4'-difluoro-4-hydroxy-3-biphenylcarboxylic acid C₁₃H₈F₂O₃

dilmefonum dilmefone 2',4'-dimethoxy-3-(4-pvridyl)acrylophenone C16H15NO3

diproleandomycinum diproleandomycin

oleandomycin 4′,11-dipropionate C41He9NO14

droclidinii bromidum droclidinium bromide

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

enhucrilatum ucrilate butyl 2-cyanoacrylate CBH11NO2

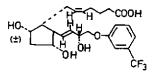
etazolatum etazolate ethyl 1-ethyl-4- (isopropylidenehydrazino) - 1H-pyrazolo [3,4-b] pyridine-5-carboxylate C14H19N5O2

fencioracum fenciorac chloro(3-chloro-4-cyclohexylphenyl)acetic acid C14H16Cl2O2

fenperatum fenperate 2-piperidinoethyl α -benzyl- α -hydroxyhydrocinnamate acetate (ester) C25H31NO4

fludazonii chloridum fludazonium chloride 1-[2,4-dichloro-β-[(2,4-dichlorobenzyl)oxy]phenethyl]-3-(p-fluorophenacyl)imidazolium chloride C₂₆H₂₀Cl₅FN₂O₂

fluprostenolum fluprostenol (\pm)-(Z)-7-[(1R*,2R*,3R*,5S*)-3,5-dihydroxy-2-[(E)-(3R*)-3-hydroxy-4-[(α , α , α ,-trifluoro-m-tolyl)oxy]-1-butenyl]cyclopentyl]-5-heptenoic acid C23H2sF3Os



flutamidum flutamide a,a,a-trifluoro-2-methyl-4'-nitro-m-propionotoluidide C₁₁ H₁₁F₃N₂O₃

وسأأأ (⁶⁷Ga) citras gallium (⁶⁷Ga) citrate

gallium - 67 Ga citrate (1:1)

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

aliflumidum umide (-)-(S)-N-(5-fluoro-2-methoxy- α -methylbenzyl)-2-[p-[(5-isobutyl-2-pyrimidinyl)sulfamoyl]phenyl]acetamide C25H29FN4O4S

leucocianidolum leucocianidol 3,3',4,4',5,7-flavanhexol C15H14O7

lofexidinum lofexidine 2-[1-(2,6-dichlorophenoxy)ethyl]-2-imidazoline C11H12Cl2N2O

macrosalbum (**mTc) macrosalb (**mTc)

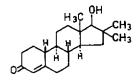
technetium (99m Tc) labelled macroaggregated human serum albumın

medifoxaminum medifoxamine

(dimethylamino)acetaldehyde diphenyl acetal C16H19NO2

mefloquinum mefloquine DL-erythro- α -2-piperidyl-2,8-bis(trifluoromethyi)-4-quinolinemethanol C17H1sF6N2O

metogestum metogest 17β -hydroxy-16,16-dimethylestr-4-en-3-one C₂₀H₃₀O₂



metoxepinum metoxepin 1-(8-methoxydibenz [b,f] oxepin-10-yl)-4-methylpiperazine C₂₀H₂₂N₂O₂

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 C₁₆H₂₂O₂

mexrenoatum kalicum mexrenoate potassium

7-methyl 21-potassium 17-hydroxy-3-oxo-17 α -pregn-4-ene-7 α ,21-dicarboxylate dihydrate C24H33KO6*2H2O

minaprinum minaprine

 $\begin{array}{lll} 4\hbox{-}[2\hbox{-}[(4\hbox{-methyl-6-phenyl-3-pyridazinyl})amino]ethyl]morpholine \\ C_{17}H_{22}N_4O \end{array}$

moxnidazolum moxnidazole

3-[[(1-methyl-5-nitroimidazol-2-yl)methylene]amino]-5-(morpholinomethyl)-2-oxazolidinone C13H18N6Os

niometacinum niometacin

5-methoxy-2-methyl-1-nicotinoylindole-3-acetic acid $C_{18}H_{16}N_{2}O_{4}$

nitramisolum nitramisole

(\pm)-2,3,5,6-tetrahydro-6-(m-nitrophenyl)imidazo[2,1-b]thiazole C11H11N3O2S

nitromifenum nitromifene 1-[2-[ρ -[α -(ρ -methoxyphenyl)- β -nitrostyryl]phenoxy]ethyl]pyrrolidine C₂₇H₂₈N₂O₄

nitroscanatum nitroscanate p-(p-nitrophenoxy)phenyl isothiocyanate C₁₃H₈N₂O₃S

octriptylinum octriptyline

1a,10b-dihydro-N-methyldibenzo [a,e] cyclopropa [c] cycloheptene- $\Delta^{a(1H),\gamma}$ -propylamine C₂₀H₂₁N

oxetacillinum oxetacillin (2S,5R,6R)-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 $C_{17}H_{18}N_2O_5S$

pirlenidonum pirfenidone 5-methyl-1-phenyl-2(1*H*)-pyridone C₁₂H₁₁NO

pirozadilum pirozadil 2,6-pyridinedryldimethylene bis(3,4,5-trimethoxybenzoate) C27H29NO10

pirolazamidum pirolazamide hexahydro-a,a-diphenylpyrrolo[1,2-a]pyrazıne-2(1H)-butyramide C23H29N3O

praxadinum praxadine pyrazole-1-carboxamidine C4H6N4

proxibarbalum proxibarbal 5-allyl-5-(2-hydroxypropyl)barbituric acid C10H14N2O4

ripazepamum ripazepam

1-ethyl-4,6-dihydro-3-methyl-8-phenylpyrazolo [4,3-e] [1,4]diazepin-5(1H)-one C₁₅H₁₆N₄O

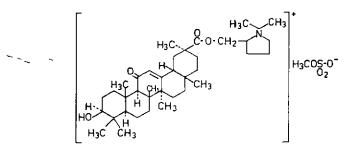
ritropirronii bromidum ritropirronium bromide

erythro-3-hydroxy-1,1-dimethylpyrrolidinium bromide a-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 C₂₀H₃₇NO₃

roxolonii metilsulfas roxolonium metilsulfate 2-(hydroxymethyl)-1,1-dimethylpyrrolidinium methyl sulfate 3β -hydroxy-11-oxoolean-12-en-30-oate C3BH63NOBS



sorbinicatum sorbinicate D-glucitol hexanicotinate C42H32N6O12

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 $C_{B}H_{15}N_{3}O_{7}$

sulindacum sulindac (Z)-5-fluoro-2-methyl-1-[p-(methylsulfinyl)benzylidene]indene-3-acetic acid C₂₀H₁₇FO₃S

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

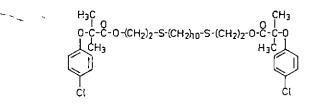
taleranolum taleranol

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

tetroxoprimum tetroxoprim

2,4-diamino-5- [3,5-dimethoxy-4-(2-methoxyethoxy) benzyl] pyrimidine $C_{16}H_{22}N_4Q_4$

tiafibratum tiafibrate 2-(p-chlorophenoxy)-2-methylpropionic acid diester with 2,2'-(decamethylenedithio)diethanol C₃₄H₄₈Cl₂O₆S₂



tidiacicum tidiacic

2,4-thiazolidinedicarboxylic acid C₅H₇NO₄S

tifemoxonum tifemoxone

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

timonacicum timonacic

4-thiazolidinecarboxylic acid C₄H₇NO₂S

tiropramidum tiropramide

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

tocofibratum tocofibrate 2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-6-chromanyl 2-(p-chlorophenoxy)-2-methylpropionate C39H59CIO4

tolciclatum tolciclate O-(1,2,3,4-tetrahydro-1,4-methanonaphthalen-6-yl) m,N-dimethylthiocarbanilate C₂₀H₂₁NOS

tribuzonum tribuzone 4-(4,4-dimethyl-3-oxopentyl)-1,2-diphenyl-3,5-pyrazolidinedione C₂₂H₂₄N₂O₃

trifluomeprazinum trifluomeprazine

10- [3-(dimethylamino)-2-methylpropyl]-2-(trifluoromethyl) phenothiazine $C_{19}H_{21}F_3N_2S$

zilantelum zilantel phosphonodithioimidocarbonic acid ethylene dibenzyl P,P,P',P'-tetraethyl ester C26H38N2O6P2S4

...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 non-

proprietary 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

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

p. 425 delete

macrisalbum (131) macrisalb (131) insert

macrosalbum (1311) _ macrosalb (1311)

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

insert

levonorgestrelum levonorgestrel D-13-ethyl-17-hydroxy-18,19-dinor-17 α -pregn-4-en-20-yn-3-one C21H2 α O2

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

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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

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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:

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p. 34 delete

cisclomifenum cisclomifene

2-[p-(2-chloro-cis-1,2-diphenylvinyl)phenoxy]triethylamine

C26H28CINO

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)

C26H28CINO

p. 132 delete

transclomifenum transclomifene 2-[p-(2-chloro-trans-1,2-diphenylvinyl)phenoxy]triethylamine

C26H28CINO

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)

C26H28CINO

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

C25H22N4O8

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

C25H22N4O8

p. 139 zeranolum zeranol

replace chemical name by the following :

(3S,7R)-3,4,5,6,7,8,9,10,11,12-decahydro-7,14,16-trihydroxy-3-methyl-

1H-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.
- 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.
 - 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 underswind the selected by the World Health Organization as a recommended international nonproprietary name while there exists a formal objection thereto filed underswind the selected by the World Health Organization as a recommended international nonproprietary name while there exists a formal objection thereto filed underswind the selected by the world international nonproprietary name while there exists a formal objection thereto filed underswind the selected by the world international nonproprietary name while there exists a formal objection thereto filed underswind the selected by the world international nonproprietary name while there exists a formal objection thereto filed underswind the selected by the world health organization as a recommendation of the selected by the world health organization as a recommendation of the selected by the world health organization as a recommendation of the selected by the world health organization as a recommendation of the selected by the world health organization as a recommendation of the selected by the world health organization as a recommendation of the selected by the world health organization as a recommendation of the selected by the world health organization as a recommendation of the selected by the world health organization as a recommendation of the selected by the world health organization as a recommendation organization as a recommendation of the selected by the world health organization as a recommendation organization as a recommendation organization as a recommendation organization as a recomme
- 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 righthe 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. Wid Hith Org., 1955, 60, 3) and amended by the Board in resolution EB43.R9 (Off. Rec. Wid Hith 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 sylved name should not be chemically misleading.
- 5. In devising names for acids, oneword 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".

- 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-	-andr-	-andr-	
or -stan-	or -stan-	or -stan-	steroids, androgenic
or -ster-	or -ster-	or -ster-	
-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
ำนฑ	-crine	-crine	acridine derivatives
/ium	-curium	-curium	curare-like drugs
-cyclinum		-cycline	antibiotics, tetracycline derivatives
-estr-	-estr-	-estr-	estrogenic drugs
-forminum		-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	•	-mycine	antimicrobial antibiotics, produced by Streptomyces strains
nifur-	ភifur-	nifur-	5-nitrofuran derivates
-onidum	-onide	-onide	steroids for topical use: acetal derivatives
-orexum	-orex	-orex	anorexigenic agents
-praminum	•	-pramine	dibenzazepine, compounds of the imipramine type
prost	prost	prost	prostaglandins
-serpinum	-serpine	-serpine	derivatives of <i>Rauwolfia</i> alkaloids
sulfa-	sulfa-	sulfa-	sulfonamides, used as antimicrobials
-terolum	-terol	LOI Q1	bronchodilators: phenethylamine derivatives
-tizidum	-tizide	-tizide	diuretics which are thiazide derivatives
-toinum	-toin	-toine	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