Pre-stems*:
Suffixes used in the selection of INN
February 2019

Programme on International Nonproprietary Names (INN)

Technologies Standards and Norms (TSN)
Regulation of Medicines and other health technologies (RHT)

World Health Organization,
Geneva

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*The prestems given have been flagged because they may be selected as official stems ("The use of stems in the selection of International Nonproprietary Names for Pharmaceutical Substances", 2013, WHO/EMP /RHT/TSN/2013.1). At present, they are made available for information and potential guidance to the applicants.
<table>
<thead>
<tr>
<th>stem</th>
<th>definition</th>
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<tbody>
<tr>
<td>-suffix</td>
<td></td>
</tr>
<tr>
<td>-infix-</td>
<td></td>
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<tr>
<td><strong>In bold:</strong></td>
<td>new pre-stems selected during the last Consultation.</td>
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<tr>
<td><strong>In bold and underlined:</strong></td>
<td>pre-stems newly promoted as stems.</td>
</tr>
<tr>
<td>-adenant</td>
<td>adenosine receptors antagonists</td>
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<tr>
<td>-algron</td>
<td>α₁-adrenoreceptor agonists</td>
</tr>
<tr>
<td>-alkib</td>
<td><strong>ALK (anaplastic lymphoma kinase) inhibitors</strong></td>
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<tr>
<td>-ampator</td>
<td>α-amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid (AMPA) receptor modulators</td>
</tr>
<tr>
<td>-batinib</td>
<td><strong>BCR-ABL kinases inhibitors</strong></td>
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<tr>
<td>-becestat</td>
<td>see <em>stat</em></td>
</tr>
<tr>
<td>-berel</td>
<td>beta estrogen receptor agonists</td>
</tr>
<tr>
<td>-bresib</td>
<td>inhibitors of the bromodomain and extra-terminal motif (BET) family of bromodomain (BRD) proteins, antineoplastics</td>
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<tr>
<td>-caftor</td>
<td>cystic fibrosis transmembrane regulator (CFTR) protein modulators</td>
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<tr>
<td>-calcet/-calcet-</td>
<td><strong>calcium-sensing receptors (CaSR) agonists</strong></td>
</tr>
<tr>
<td>-camra</td>
<td>intracellular adhesion molecule (ICAM-1) derivatives</td>
</tr>
<tr>
<td>-camtiv</td>
<td><strong>cardiac myosin activators</strong></td>
</tr>
<tr>
<td>-casan</td>
<td>caspase inhibitors</td>
</tr>
<tr>
<td>-caserin</td>
<td>serotonin receptor agonists (mostly 5-HT₂)</td>
</tr>
<tr>
<td>-cerfont</td>
<td>corticotropin-releasing factor (CRF) receptor antagonist</td>
</tr>
<tr>
<td>-closporin</td>
<td>ciclosporin derivatives</td>
</tr>
<tr>
<td>-codar</td>
<td>see <em>dar</em></td>
</tr>
<tr>
<td>-copan</td>
<td>complement receptor antagonists/ complement inhibitors</td>
</tr>
</tbody>
</table>
-corat  glucocorticoid receptor agonists
-eridar  see dar
-dacin  antibiotics, DNA gyrase and topoisomerase IV inhibitors
dar  drugs used in multidrug resistance
   -cridar  acridinecarboxamide derivatives
   -codar  pipecolinate derivatives
   -spodar  cilostatin D derivatives
   -demstat  see stat
   -depsin  depsipeptide derivatives
-dil  vasodilators
   -sudil  Rho protein kinase inhibitors
   -ectedin  ecteinascidin derivatives
-erkip  ERK (extracellular signal-regulated kinases) inhibitors
-espib  heat shock protein (HSP) 90 inhibitors (other than -mycin), antineoplastics
-estrant  estrogen antagonists
-fadine  monoamine transport inhibitors
-farnib  farnesyl transferase inhibitors
-fexor  farnesoid X receptor agonists
-fibatide  see tide
-fulven  antineoplastic, acylfulvene derivatives
   irofulven (85)(45)
-fusp  fusion proteins¹

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¹ A fusion protein is defined as a multifunctional protein derived from a single nucleotide sequence which may contain two or more genes or portions of genes with or without amino acid linker sequences. The genes should originally code for separate proteins, with at least two of them endowed with pharmacological action (e.g. action and targeting). “Notes from the fusion protein Working Group”, INN Working Document number 17.414 rev.
-ganan antimicrobial, bactericidal permeability increasing polypeptides

-gapil neuronal apoptosis inhibitors, GAPDH

-glustin see stat

-golix gonadotropin releasing hormone (GnRH) antagonists

-imepodib inosine monophosphate dehydrogenase inhibitors

-inurad urate transporter inhibitors

-ixafor chemokine CXCR4 antagonists

-ixibat ileal bile acid transporter (IBAT) inhibitors, bile acid reabsorption inhibitors

-kalner openers of calcium-activated (maxi-K) K^+-channels

-leptin(e) leptin derivatives

–leuton 5-lipo-oxygenase inhibitors, anti-inflammatory

mab monoclonal antibodies
under targets
-ami- serum amyloid protein (SAP)/amyloidosis
-gr(o)- skeletal muscle mass related growth factors and receptors

-melanotide see tide

-metkib MET (mesenchymal epithelial transition factor) kinases inhibitors

-metinib see tinib

-moren non-peptidic growth hormone secretagogues

-nesib kinesin inhibitors

-neurin neurotrophins

-nexor nuclear export inhibitors
nil benzodiazepine receptor antagonists/agonists
 -punil mitochondrial benzodiazepine receptor (MBR)-selective agonists, also partial or inverse (purine derivatives)
 -opran μ-opioid receptors antagonists
 -osuran urotensin receptor antagonists
 -otilate hepatoprotectants, di(propan-2-yl) 2-(2H-1,3-dithiol-2-ylidene)propanedioate and analogues
 -parantag antagonists of heparin and/or low-molecular weight heparins (LMWH)
 -paxar protease activated receptor type 1 (PAR1) antagonists
 -pirdine serotonin receptor antagonists
 -plasinin inhibitors of plasminogen activator inhibitors-type 1 (PAI-1)
 -plenib Spleen tyrosine kinase (Syk) inhibitors
 -prinim nootropic agents, purine derivatives
 -protafib protein tyrosine phosphatase (HPTP) inhibitors
 -pultide See -tide
 -punil see nil
 -setrag serotonin (5-HT3/4) receptor agonists, prokinetics
 -sidenib isocitrate dehydrogenase inhibitors
 -spodar see dar
 -stat/-stat enzymes inhibitors
  -becestat beta secretase inhibitors
  -demstat histone lysine specific demethylase inhibitors
  -glustat ceramide glucosyltransferase inhibitors
 -stinel NMDA receptor antagonists / agonists
 -sudil see dil
 -sulind antineoplastics, sulindac metabolites
-terone  antiandrogens
-teronel  non-steroid antiandrogens
-texafin   texaphyrin derivatives
-tide      peptides and glycopeptides
  -fibatide  platelet aggregation inhibitor (GPIIb/IIIa receptor antagonist)
  -melanotide  melanocortin receptor antagonists
-pultide   peptides used in pulmonary surfactants
-tinib     tyrosine kinase inhibitors
  -ertinib  epidermal growth factor receptor (EGFR) inhibitors
  -trectinib  tropomyosin receptor kinase (TRK) inhibitors
-tirom(-)  antihyperlidaemic; thyromimetic derivatives
-toc lax B-cell lymphoma 2 (Bcl-2) inhibitors, antineoplastics
  -trectinib  see -tinib
-trep      transient receptor potential antagonists
-trombopag  thrombopoietin agonists
-vancin    vancomycin related compounds

**vir**  antivirals (undefined group)
  -virenz   benzoaxatinone derivatives

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