

Prescrire's contribution to the WHO consultation on Proposed INN: List 98

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About Prescrire
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Together with other members of the Medicines in Europe Forum and the International Society of Drug Bulletins (ISDB), *Association Mieux Prescrire* (AMP) has long been promoting the systematic use, by healthcare professionals and patients, of International Nonproprietary Names (INNs), which are clearer and therefore safer (1-4).

Making INNs safer. The basic principles underlying the selection of individual INNs are the same that apply to the prevention of medication errors, namely standardization, differentiation, redundancy, and built-in logical controls. INNs make pharmaceutical substances easier to identify and are less frequently confused than trade names (5).

However, even with the INN system there is a residual risk of confusion, partly owing to the sheer number of INNs now in circulation. A report from the Council of Europe, which recommends the use of INN, calls for active participation in public consultations on proposed INNs, within a four-month period of the date of final adoption, in order to review proposed INNs from the perspective of in-use safety (6). The *Prescrire* editorial team has decided to participate in this consultation, and has thus examined the List 98 of Proposed INN published on 4 January 2008 (7).

Critical assessment of proposed INNs. We based our analysis of the List 98 of Proposed INNs on the 2006 list of common stems in the Summary List 12 CD-ROM, and on a database of drugs marketed in France which provides both trade names and corresponding INNs (8,9,10). We used a two-step Delphi method. First, *Prescrire* editors compiled a list of potentially litigious proposed INNs, along with the relevant reasons. For each of the 12 proposed INNs selected for further scrutiny in this first step, the editors assessed the risk of confusion and/or misunderstanding, along with the potential clinical consequences of such errors. Finally, they decided whether a simple comment or a formal objection was more appropriate for each litigious INN, and listed their arguments.

Formal objection: quarfloxine

Quarfloxine strongly suggests a quinolone and presents a specific risk of confusion with *sparfloxacin* when the word is handwritten. We consider that the risk of confusion in this case is critical, both in terms of frequency and potential gravity. The high risk related to the toxicity of this anticancer drug therefore warrants a formal objection.

Comments

Risk of confusion with other INNs or stems. Some of the proposed INNs do not comprise a common stem or a newly selected pre-stem (8,10), while others carry a risk of confusion with other INNs or with other common stems. These include: *almorexant*, *dacetuzumab*, *fermagate*, *folitixorine*, *levonebivolol* and *radiprodil*,

In *almorexant* the common stem **-orex** is not at the end, which is logical as it is not an amphetamine. Even so, the editorial team has identified a risk of confusion between this hypnotic agent and anorectics.

Dacetuzumab presents a high risk of confusion with *daclizumab*, and would be safer with a different beginning. Should these two substances be available on the same market it would be necessary to ensure their labelling was sufficiently different, for example by highlighting CETU and CLI in bold or capitals.

Another proposed INN with an identical prefix and suffix is *levonebivolol*, which is very similar to *levobunolol*, the prefix **levo-** increasing the risk of confusion already existing between *nebivolol* and *bunolol*. Here again, if both substances are available together, the NEBI and BUN would need emphasising in order to differentiate them clearly.

Fermagate evokes the common stem **-bamate**, as in *meprobamate* and *felbamate*, hence a risk of confusion with *felbamate*.

The editorial team identified potentially serious risks of confusion between *folitixorine* and *thyroxine*, particularly in the case of long-term treatment, while recognising that this hormone name is not an INN.

As for *radiprodil*, the editorial team identified risks of confusion (in writing) with *ramipril* and observed that the suffix was the same as that of *ifenprodil*, **-dil** suggesting a vasodilator. If **-prodil** is to become a common stem, this should be pointed out to avoid confusion between pharmacotherapeutic classes with different properties.

Barriers to good understanding of proposed INNs: foreseeable difficulties. Some INNs are difficult to understand, because they are too complex to memorize easily (especially *amolimogene bepliplasmide* and *anrukinzumab*).

Although *anrukinzumab* adheres to the letter of the regulations relating to monoclonal antibodies, it became apparent that the risk of confusion with other **-zumabs** was exacerbated by the difficulty in reading, writing and pronouncing this INN. If it were to be reconsidered, the editorial team suggests replacing the prefix anru- by anur- to make it easier to read and pronounce.

The same applies to *amolimogene bepliplasmide*, even though the names are perfectly informative. A special effort will be required to inform and educate health professionals and the public when they are handling such substances.

Overall, in the course of this second consultation on proposed INNs, the *Prescrire* editorial team considers that the WHO INN Programme should continue its efforts towards informing and educating healthcare professionals and patients so they can handle INNs easily.



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Chief editor

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