

Lab.1

Drugs naming & classification

:Drugs classification

It is essential because it allows several thousand of drugs to be .reduced to a manageable number of groups

:Drugs may be **classified** according to

Body system ex. cardiovascular, GIT, CNS... **.1**

2.Therapeutic uses ex: Receptor blocker, enzyme inhibitor, .carrier molecule, ion channel

.Mode or site of action .3

.A. molecular interaction Ex. glycosides, alkaloid, steroid

B. cellular site ex: loop diuretic, catecholamine uptake inhibitor (imipramine)

.Molecular structure ex: alkaloid, steroid, glycoside **.4**

:Nomenclature (naming)

Any drug may have name in all 3 of the following
:classes

The full chemical name (unsuitable for .1
prescription). Usually used in newly discovered
.substances

It is useful for chemists or technical personnel
as it provides the precise arrangement of atoms
and atomic groups in the molecule.

A non proprietary name (Generic) : .2

classified as

official : used in pharmacopeia-1

:Approved-2

BAN (British Approved Name) like adrenaline in a BAN form and

epinephrine in **rINN** (recommended International Non proprietary Names) form, even the drug is the same one, this may lead to public health risk so we use the rINN as a naming of drug in our writing

.WHO chooses (rINN)

A proprietary (brand) name: this represent the .3 commercial property of a pharmaceutical company or companies

They are written with **capital initial** letter and are often further distinguished by **superscript**

R in circle ®

: **Ex**

dihydro -5H- dibenz-11 ,10)-3 .1
[b.f]-azepin-5-(yl). **(Chemical name)**

Imipramine. **(Non prop.)** .2

Tofranil ®, prodepress ®, surplix ®(varies .3
company) **(prop.)**

EX. Paracetamol

- **CHEMICAL NAME:** *N* - (4-hydroxyphenyl) acetamide.

- **NON-PROPRIETARY NAME:**

Approved Name: British Approved Name (BAN):
paracetamol

United States Adopted Name (USAN):
acetaminophen

Official Name: Acetaminophen

- **PROPRIETARY NAME:** Panadol, Calpol, Adol

Generic name Diazepam, Nitrozepam and Flurazepam are of benzodiazepines, their proprietary names are Valium, Magadone and Dalmane respectively

:Notes

Names ending in suffix **olol** represent
.adrenoceptor blockers

.While in suffix **Pril** represent ACE-inhibitors

In suffix **floxacin** represent quinolone
.antimicrobials

When a prescription is written in form of a **proprietary product**, pharmacists under **UK** law must dispense that product only, but by agreement with prescribing doctor, they may substitute an approved generic product, this is called **generic substitution**

What is **not permitted** is the substitution of a different molecular structure drug deemed to be pharmacologically and therapeutically equivalent, .this is called **therapeutic substitution**

The principle reason for advocating the habitual use of nonproprietary (generic) names in prescribing are

Clarity: because it gives information about the .1
.class of the drug

Ex. Nortriptyline and amitriptyline are plainly related but their proprietary names Allegron and .Lentazol are not

Economy: non proprietary named drugs are .2
usually but not always cheaper than the
.proprietary naming drug

Convenience: when a generic name is used the .3 pharmacists may supply what ever version of drug they stock, where as if a proprietary name is used they are obligated to supply that .preparation (alone) only

A **Mixture** of drugs is some time given and this represent by adding the **perfix Co** which indicated that more than one active ingredient are used Ex. Co_ Amoxiclav for Augmentin which is a combination of Amoxicillin and a .calvulinic acid

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:NOTES

It is **reasonable** to use the proprietary names when **dosage** and therefore the **pharmaceutical bioavailability**, are **critical** so that small variations in the amount of drug available for .absorption can give big effects on the patient

Ex. Drugs with low therapeutic ratio Ex. Digoxin, hormone replacement therapy, adrenocortical steroid (oral), antiepileptic, cardiac antiarrythemics, warfarine, sustained released .drugs, and here the proprietary name is a role

THANK YOU

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