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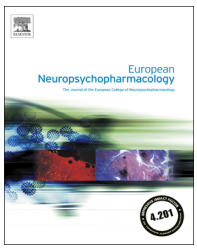

A proposal for an updated neuropsychopharmacological nomenclature

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Abstract
Current psychopharmacological nomenclature remains wedded in an earlier period of scientific understanding, failing to reflect contemporary developments and knowledge, does not aid clinicians in selecting the best medication for a given patient, and tends to confuse patients by prescribing a drug that does not reflect their identified diagnosis (e.g. prescribe "antipsychotics" to depression). Four major colleges of Neuropsychopharmacology (ECNP, ACNP, Asian CNP, and CINP) proposed a new template comprising a multi-axial pharmacologically-driven nomenclature tested by four surveys. The template has five axes: 1—class (primary pharmacological target and relevant mechanism); 2—family (reflecting the relevant neurotransmitter and mechanism); 3—neurobiological activities; 4—efficacy and major side effects; and 5—approved indications. The results of the surveys suggest that the clinicians found the available indication-based nomenclature system dissatisfactory, non-intuitive, confusing, and doubt-inducing for them and the patients. The proposed five-axis template seeks to upend current usage by placing pharmacology rather than indication as the primary axes, with the proposed nomenclature relating primarily to Axis 1—the class, and usage of the other axes would largely depend upon the extent to which the clinician seeks to deepen the scientific and clinical base of

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[1]Chair of NC-IUPHAR. MS participated in the initial classification framework discussions as the Chair of NC-IUPHAR. However, he did not participate in the drug evaluations.

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his involvement. A significant proportion of the participants in the four surveys were in favour of the proposed system, a similar number wanted to consider the idea further, and only a small proportion (8.6%) were against it. The proposed five-axis pharmacology based nomenclature template is a system which might refresh and reflect the current scientific concepts of neuropsychopharmacology.

1. Introduction

Ideally, pharmacological nomenclature should embody contemporary scientific knowledge, help the clinician in making an informed decision, and enhance patient adherence to the treatment plan. Unfortunately, current psychiatric drug classification (Figure 1) fails to serve any of these purposes. First, it does not reflect the advances in our knowledge. Thus, for example, the terms "antidepressant" and "antipsychotic" were coined in the early 1950s in line with their clinical use during that period—long before the relevant neuroscience information was understood. The anachronistic "antipsychotic" was even extended to "second generation antipsychotics"—a term that, despite its potential marketing appeal, has no relation to current neuropsychological knowledge either of the psychotropic's relevant modes of action or its potential clinical efficacy.

The class to which a drug belongs reflects neither its relevant neurotransmitter nor its mechanism of action and consequently does not guide the clinician as to the full spectrum of disorders it can be used to treat. The nomenclature employed by our colleagues in hypertension, in contrast, identifies the drug's principal mode of action (see Table 1), thus guiding them towards a combination of medications that address different mechanisms when seeking to augment the response to the treatment.

Finally, the current nomenclature is also confusing to the patients, as some of the "antipsychotics" are used to treat both depression (e.g., quetiapine, olanzapine, etc.) (Bauer et al., 2009; Thase et al., 2007; Berman et al., 2007) and anxiety disorders (e.g., olanzapine and quetiapine) (Komossa et al., 2010; Zohar and Allgulander, 2011), thus liable to cause patients to become confused: "Why I am being prescribed an 'antipsychotic' when I am suffering from depression or anxiety". "Is my situation that bad, Doctor? Am I in danger of becoming psychotic?" Under such circumstances, it is not difficult to understand that adherence to the course of medication prescribed may be seriously compromised.

The term "antidepressant" fares little better. Many antidepressants are also employed as "anti-anxiety" medications when the patient is not depressed (Zohar et al., 1987). This is again likely to be confusing and/or worrisome for the patient: "Why am I given antidepressants if I am not depressed?"

The present contributors also contend that, just as updates are constantly sought with respect to diagnosis (DSM III, IV, 5, ICD 9, 10, 11, etc.), similar adjustments to pharmacology nomenclature should be sought.

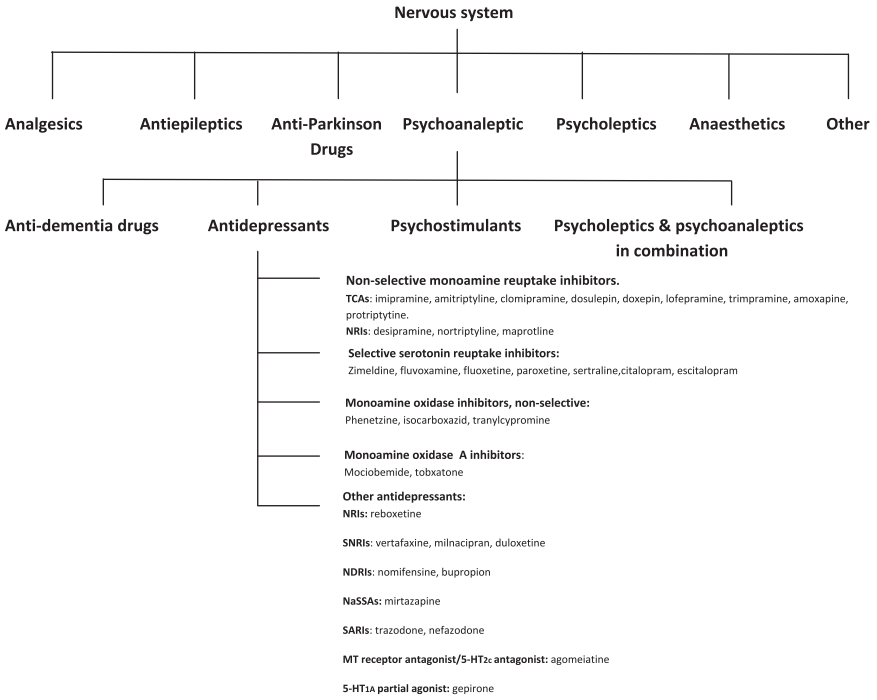

Figure 1 Current antidepressant nomenclature under the WHO system.

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