Editorial

Mood stabilizers as an Achilles' heel for indication-based nomenclature and roles of Neuroscience-based Nomenclature

'MOOD STABILIZERS' ARE collectively referred to as drugs used for the treatment of bipolar disorders, but they are fuzzy in concept. While some definitions, such as 'drug that has efficacy in the treatment of acute manic and depressive episodes and in the prevention of recurrences,' have been proposed,[1,2] Malhi and Chengappa recently proposed two opposite views on this term: (i) to define a mood stabilizer as 'it must achieve sustained long-term functional mood stability and discernibly prevent future illness'; or (ii) 'it is time to retire the term, mood stabilizer.'[3] In reality, there has been no clear consensus on the definition of, and what constitutes, 'mood stabilizers.'

Several 'mood stabilizers' are also used for various other conditions, including epilepsy. Moreover, some of the 'antipsychotics' used for schizophrenia also have mood-stabilizing effects and are often indicated for bipolar disorder. Thus, there is a significant gap between the disease-based nomenclature and clinical indications.

To better appreciate the current complex conditions, we conducted a systematic examination of official indications of the drugs that have been approved for bipolar disorder and are available either in Japan or the USA. The approved indications of 17 drugs that have an indication for bipolar disorder are summarized in Table S1. In Japan, the approved indications other than bipolar disorder include schizophrenia, major depressive disorder, dysthymia, autistic disorder, epilepsy, migraine, trigeminal neuralgia, nausea and vomiting, restlessness and apprehension before surgery, tetanus, and hiccups. In the USA, the approved indications for these drugs besides bipolar disorder include schizophrenia, major depressive disorder, autistic disorder, epilepsy, Tourette's disorder, migraine, nausea and vomiting, restlessness and apprehension before surgery, tetanus, hiccups, psychotic disorders, porphyria, and severe behavioral problems in children.

These results confirm the discrepancy between the term 'mood stabilizers' and their approved indications.

This discrepancy is problematic and perplexes patients and their families; moreover, it leads to a misunderstanding of the rationale for the prescription, which in turn negatively impacts adherence to pharmacotherapy.[4,5] This disease-based nomenclature is confusing not only for patients but also for medical doctors. They prescribe 'antidepressants' for anxiety disorders and 'antipsychotics' for depression. Indeed, we recently reported on a significant gap between the generic terminology of 'antipsychotics' and 'antidepressants' and their actual approved indications.[5] In general, more than half of 'second-generation antipsychotics' and 'newer antidepressants' were found to be approved not only for psychotic disorders and depression, respectively, but also for a variety of other psychiatric and psychological conditions. While generic names, such as 'mood stabilizers,' 'antipsychotics,' and 'antidepressants' may still be useful for communication purposes to some extent, a potential solution for this confused and confusing terminology is a proposal to move from disease-based to pharmacology-driven nomenclature.

Along these lines and also in order to reflect the recent advances in neuroscience, the Neuroscience-based Nomenclature (NbN) has been proposed.[4,6,7] This pharmacologically driven nomenclature provides a new platform to reflect up-to-date new scientific knowledge and may also be more useful and appropriate not only in clinical practice for both patients and clinicians but for basic and clinical research as well. This nomenclature aims to reflect the best of current pharmacological knowledge. It is true that our current knowledge is limited to adequately defining the primary target or to elucidating the exact mechanisms of action; the background on the efficacy of lithium remains obscure to date, for

instance. However, the NbN is a platform that reflects up-to-date scientific evidence on the pharmaceutical compounds. With the accumulation of knowledge on these drugs, the NbN will become closer to perfection.

DISCLOSURE STATEMENT

J.Z. and H.U. are taskforce members of the Neuroscience-based Nomenclature as a representative of the Asian College of Neuropsychopharmacology.

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SUPPORTING INFORMATION

Additional Supporting Information may be found in the online version of this article at the publisher's web-site:

Table S1. Approved indications of drugs indicated for bipolar disorder or mania in Japan and the USA.

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