Biomarkers and Emerging Drug Targets in Neuropsychiatry (Part II)

Although the pathophysiology of psychiatric disorders is largely unknown, an increasing amount of data led to the shared opinion that these pathological conditions are complex phenomena resulting from the interplay of multiple factors affecting individuals with a pre-existing genetic or environmental vulnerability. Currently, the classical monoamine theories of psychiatric disorders might appear naive if considered isolated. However, they are not rejected nowadays but included in a more sophisticated picture of processes and cascade of events, such as neuroinflammation, stress response, and neuroplasticity, enlightening them with novel meanings. It is evident that the lack of comprehensive hypotheses is an obstacle to targeted therapeutic interventions. As a result, the current pharmacological options should be considered mainly symptomatic, with no disorder specificity, and with a relevant non-response rate. Given the social impact of psychiatric disorders, especially mood disorders and psychoses, it is mandatory on one side to deepen the research of their possible biological underpinnings and, on the other, to possibly identify more focused pharmaceutical targets promoting innovative treatment strategies. It would also be essential to be more creative in proposing hypotheses to be tested in neuropsychiatry and psychopharmacology on the basis of even scattered data deriving from basic research.

Therefore, the aim of this thematic issue was to review current and novel biomarkers in some psychiatric disorders and to highlight their potential as promising and novel targets for future psychotropic drugs.

Much focus of this issue was given to possible biomarkers in mood disorders, in particular to those related to circadian rhythms (“Molecular link between circadian rhythmicity and mood disorders”), to the GABA system, an old, albeit novel target, given the renewed interest in it (GABA System in Depression: Impact on Pathophysiology and Psychopharmacology), and to elderly depression (“Different sides of depression in the elderly: An in-depth view on the role of Aβ Peptides”). The paper entitled (“Neutrophil/lymphocyte, platelet/lymphocyte and monocyte/lymphocyte ratios”) in mood disorders highlights how the simple, cheap and non-invasive assessment of white cells and platelets ratio might support the role of inflammation in mood disorders. Long the line of biomarkers, the last paper of this issue, entitled (“In search for biomarkers in obsessive-compulsive disorder: new evidence on saliva as a practical source of DNA to assess epigenetic regulation”), suggests the possible utility of saliva in exploring epigenetic mechanisms in obsessive-compulsive disorder, a common psychopathological condition with a great impact and negative interference with the quality of life of the patients.

REFERENCES