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Corrigendum

Corrigendum to "Role of UHRF1 in malignancy and its function as a therapeutic target for molecular docking towards the SRA domain" [Int. J. Biochem. Cell Biol. 114 (September 2019) 105558]

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ABSTRACT

Cancer pathogenesis has been attributed to the minor and major disruptions in the cell cycle, with a key role being played by several of the recently discovered epigenetic factors. Lately, UHRF1 (Ubiquitin-like with containing PHD and RING Finger domains 1), an epigenetic regulator has been shown to be evidently over expressed in numerous malignancies through an in-depth review of literature. Molecular docking studies have found that existing drugs such as propranolol, naphthazarin and thymoquinone have favourable interactions with specific domains of UHRF1. However, these findings would need large scale clinical trials to confirm their potency and safety during chemotherapy. UHRF1 (Ubiquitin-like with containing PHD and RING Finger domains 1), an epigenetic factor, plays a crucial role as an important checkpoint in the cell machinery. Basic science continues to unravel multiple facets of this five domain protein which includes a detailed elucidation of its roles and mechanisms of interaction with various enzymes during DNA replication. The gene has recently begun to be also termed as the "Universal Oncogene" in response to the results of research conducted in heterogenous populations and in over 17 cancers displaying heightened mRNA and protein expression in breast, liver, lung, head and neck cancers and many more. This gene could therefore, be a potential biomarker for diagnosis and for the prediction of the prognosis and survival of the diseased. A scientifically established solution in the form of targeted treatment must follow such a discovery and therefore, several natural and synthetic compounds such as thymoquinone and the well-known antihypertensive, propranolol have been docked and reported to have favourable interactions with the SRA (Set and Ring Associated) domain of UHRF1 in this review. This comprehensive review is thus, a brief synopsis of details regarding the structure and heightened levels of UHRF1 in several malignancies. Furthermore, pharmacogenomic research revolving around this oncogene is a potential sphere for clinical studies to be conducted in much larger and heterogenous populations to not only validate these therapeutic docking results but to also to bring personalised medicine to the bedside for the benefit of the patients.

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