Recent Advances in Small Molecule Medicinal Chemistry to Treat Human Diseases: Part V

In the present scenario, natural resources and their extracts are being explored extensively for the treatment of various life-threatening diseases. Any departure from or interruption of the normal structure or function of any biological part, organ, or system is characterized by a distinctive collection of symptoms and signs whose origin, pathophysiology, and prognosis may be recognized or unknown. According to a report, “A condition is a disorder if and only if (a) the condition causes some harm or deprivation of benefit to the person and (b) the condition results in the inability of some internal mechanism to perform its natural function, evolutionary explanation existence and structure of the mechanism.”

In this thematic issue, several review articles contributed by the scientists and researchers of different areas of medicinal chemistry, synthetic chemistry, and new emerging multi-drug targets are presented.

This issue begins with a review article titled “Recent development in fluorescent probes for copper ion detection” by Ali et al. It reports recent progress in the advancement of three fields of fluorescent probes: chemodosimeters, near IR fluorescent probes, and ratiometric fluorescent probes. Methods used to develop these fluorescent probes and the mechanisms that govern their reaction to specific analytes and their applications in studying biological systems are also highlighted [1].

The next article of this issue is a research article titled “Synthesis, molecular docking, and 2D-QSAR modeling of quinoxaline derivatives as potent anticancer agents against triple-negative breast cancer” by Kaushal et al., focusing on synthesizing and developing the 2D-quantitative structural activity relationship model (QSAR) of quinoxaline derivatives as a potential anticancer agent [2].

The third article of this issue is a research article titled “Solanum pubescens wild fruits essential oil – A golden casket for its antimicrobial and anti-inflammatory mediated wound healing efficacy in vertebrate model Mus musculus” by Rahman et al. It evaluates the chemical composition of S. pubescens fruit essential oil analyzed by Gas Chromatography-Mass Spectrometry (GC-MS) followed by antibacterial, antifungal, anti-inflammatory, analgesic and wound healing activities using appropriate models to uncover its biological potentials [3].

The last article of this issue is a research article titled “Probing the interaction of Selonsertib with human serum albumin: In silico and in vitro approaches” by Baig et al., focusing on binding characteristics, mechanism of interaction, and dynamic behaviors of selonsertib with human serum albumin (HSA), a major circulatory transport protein [4].

Finally, I would like to thank all the authors who contributed to this issue titled “Recent advances in small molecule medicinal chemistry to treat human diseases”.

REFERENCES


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