Editorial

It gives me immense pleasure to bring to you the 4th volume of Journal of Pharmaceutical Sciences and Technology Management (JPSTM). As always, this issue of JPSTM with an objective of bringing in the novel works in the diverse field of pharmaceuticals comprehends a collection of articles on some of the exciting works related to pharmacy and technology management.

The research article "Exploring Transdermal Drug Delivery of Buspirone through Microemulsions in Conjugation with Microneedles" by Prasad and Lalan explores the possibility of formulating Buspirone as microneedles. The article showcases the use of transdermal delivery for buspirone loaded in a microemulsion so that the formulation works as an alternate to oral delivery.

Yet another research article by Surti et al. throws light on the use of double layered microspheres on two antihypertensive drugs Losartan potassium and amlodipine besylate, entitled "Formulation and characterization of combination therapy based double layered microspheres of antihypertensive drugs". The paper used factorial design to optimize the formulation. Combination therapy of the antihypertensive drugs show promising results to evade the risks of side effect because of higher dose administered with the monotherapy.

The pursuit for understanding the comparative information on the structure and function of biological macromolecules is the need of the time. The article on "NMR in structural determination of proteins and peptides" by Mishra and Coutinho is a state-of-the-art write-up on how the recent innovations on NMR measurements are of prime importance in arriving at the 3D structure of the biological macromolecules. The 3D molecular model is useful in determining the relative spatial locations of the secondary structure elements.

The article "Scope of natural sweeteners over artificial sweeteners in diabetes mellitus" by Shelat et al. reviews the scope of natural sweeteners and their benefits in diabetes care.
Late 19th century saw the expansion of the artificial sweeteners like saccharin, aspartame and sucralose which showed higher fraction of sweetness about 500 times than the sugar. However, issues related to their use caused shrunken thymus gland, decreased RBC count and damage to liver and kidney which led to their ban in some countries. In contrast to artificial sweeteners, the natural sweeteners were comparatively safer with no side effects. This was attributed to them being originated from the plants. With their ability to provide equal sweetness they are able to work efficiently as the sugar substitutes. The article discusses glycyrrhiza glabra and

stevia which are the most commonly used natural sweeteners. The highlight of the article is the discussions on preclinical and clinical trials done on artificial and natural sweeteners.

Pacemakers are known for treating arrhythmias of heartbeat by regularizing the heartbeats to normal by signaling appropriate electrical pulses. The article “Role of Pacemakers in restoring the rhythm of life” by Ashish Singh gives valuable inputs on recent developments in various types of pacemakers. The recent innovations on single and dual chamber, rate responsive, magnetic resonance safe have been explained. The world’s smallest pacemakers “Leadless pacemakers” which can be easily inserted in right side of heart by a catheter have been elaborated. The concept of pacing the heart has been clearly explained along with the smart way this small device senses the hearts natural rhythm.

Overall, this JPSTM issue brings together some of the noteworthy works of multidisciplinary nature to develop interest in these types of works. We sincerely hope that the readers would enjoy reading and learning from these articles.

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