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Formulation and evaluation of ethosomal gel containing *Sarcostemma acidum* plant extract

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Somlata (*Sarcostemma acidum*) herb is highly used by the rural and tribal people in curing various disorders. The aim of the current investigation is formulation and evaluation of ethosomal novel vesicular carrier bearing *S. acidum* extract. Ethosome has become an area of research interest in herbal formulation because of it's enhanced skin permeation and improved entrapment efficiency. *S. acidum* loaded ethosomal carriers were prepared, optimized and characterized for microscopy, vesicular size, entrapment efficiency, stability and *in-vitro* release study. The entrapment efficiency of ethosome suspension containing ethanolic extract, formulation FE8 was found to be highest (75.91%) while FE3 formulation showed least entrapment efficiency (66.66%). The entrapment efficiency of formulation containing EAE was observed to be highest for $FE8_{EAE}$ formulation (74.54%) and least for $FE3_{EAE}$ (58.87%). *In-vivo* anti-inflammatory study of optimized ethosomal gel formulation (FE_{EAE}) reviled that percentage inhibition of edema by ethosomal gel containing EAE extract was observed to be -32.13% 9 (at 1 hr.) and 42.03% (at 4 hr.) and it was concluded from the present work that ethosomal gel containing ethyl acetate extract of *S. acidum* herb can use as a alternative medicine in treatment of inflammation disease.

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Applications of fragment QM to biological problems

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Retrotransposons constitute almost half of the human genome and are considered to be one of the major driving forces in the evolution of eukaryotic genomes. They are classified into two major types, long terminal repeat (LTR) retrotransposons, which include retroviruses, and non-LTR retrotransposons. The non- LTR retrotransposon LINE1 (L1) and LINE2 (L2) clades, which are widespread among vertebrates, differ in two important structural and functional characteristics. First, the L1 retrotransposon carries two open reading frames (ORF) encoding ORF1p, an RNA binding protein, and ORF2p, a polyprotein with endonuclease and reverse transcriptase activity. In contrast, the L2 retrotransposons can encode either one (ORF2p) or two ORF proteins, ORF1p being expendable for retrotransposition in cultured cells. Second, unlike the L1 reverse transcriptase that can mobilize other RNA species, the L2 enzyme is specific for its own 3′ UTR. Furthermore, while both L1 and L2 elements are present in fish, amphibians and reptiles, only the L1 retrotransposon clade has greatly expanded in mammals, reaching 17% of the human genome. In contrast, the L2 retrotransposons are inactive in placental mammals, with only highly defective copies present in the human genome. In fact, a massive reduction in the diversity of active LINE retrotransposon families occurred during the evolution of tetrapod genomes. This ancient conflict between the retroelements and their hosts has driven the evolution of many host defense systems in, one of them being the AID/APOBEC proteins. A representative ligand-fragment approach is the similarity zinc- ensemble approach which predicts new binding pocket domains using structure similarity technical fields of selected high-throughput screening (HTS) retro-mimetic ligands. Due to several million different small-poly-pharmacophore molecules will be *in silico* designed in a single HTS campaign within the cell populations for screening could easily invalidate an entire campaign. As a result in this scientific drug discovery approach we introduce an *in silico* discovery and rationally prediction of the solution structure of Differential petide mimetic active inhibitors of LINE1 and LINE2 conserved retrotransposition mechanism in the host defence AID/APOBEC The AID/APOBECs, a group of cytidine deaminases, represent a somewhat unusual protein family that can insert mutations in DNA and RNA as a result of their ability to deaminate cytidine to uridine.

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