

Development of Self Emulsifying Drug Delivery Systems (SEDDS) of Anticancer Agents Used in AYUSH System of Medicine for Improved Oral Bioavailability Followed by Their Pharmacological Evaluation Using Biotechnological Techniques

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Abstract : The use of oral anticancer drugs from AYUSH system of medicine is widely increased among the society due to their low cost, enhanced efficacy, increased patient preference, lack of inconveniences related to infusion and they provide an opportunity to develop chronic treatment regimens. However, oral delivery of these drugs usually laid down by the limited bioavailability of the drug, which is associated with a wide variation. As most of the cytotoxic agents have a narrow therapeutic window and are dosed at or near the maximum tolerated dose, a wide variability in the bioavailability can negatively affect treatment result. It is estimated that 40% of active substances are poorly soluble in water. The improvement of bio-availability of drugs with such properties presents one of the greatest challenges in drug formulations. There are several techniques reported in literature. Among all these Self Emulsifying Drug Delivery System (SEDDS) has gained more attention due to enhanced oral bio-availability enabling a reduction in dose. Thus, SEDDS anticancer drugs will have the increased bioavailability and efficacy. These dosage form will provide societal benefit in a cost-effective manner as compared to other oral dosage forms. Present study reflects on the formulation strategies as SEDDS for oral anticancer agents of AYUSH system for enhanced bioavailability with proven efficacy by cancer cell lines.

Keywords : anticancer agents, AYUSH system, bioavailability, SEDDS

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