

Technology Transfer

Area of Technology: Mechanical Engineering

Title of the Innovation: TOPICAL DOSAGE FORM OF APREMILAST FOR MANAGING OCULAR HYPERTENSION

Brief About Innovation

Increased intraocular pressure is a frequently observed disorder of the eye, which is often associated with optic nerve damage; mostly cases are associated with glaucoma diseases. Glaucoma is diagnosed when characteristic optic nerve and vision changes occur; typically, with elevated eye pressure but occasionally with normal pressure. Recent data on patients with ocular hypertension from the Ocular Hypertension Treatment Study have shown that they have an average estimated risk of 10% of developing glaucoma over 5 years. This risk may be decreased to 5% (a 50% decrease in risk) if eye pressure is lowered by medications or laser surgery. Apremilast is a PDE4 inhibitor and got approval by the FDA for the treatment of active psoriatic arthritis and plaque psoriasis in adult. Due to its potency of inhibiting PDE4 selectively, this may be useful in treating inflammatory responses of glaucoma and other chronic inflammatory diseases.

Salient Features:

- The present invention relates to the pharmaceutical composition for managing ocular hypertension. More particularly, the present invention relates to the pharmaceutical composition comprising Apremilast and one or more of pharmaceutically acceptable carriers, preservatives or solubilizing agent used for the managing ocular hypertension.
- The primary object of the present invention is to provide a pharmaceutical composition comprising of a PDE inhibitor such as Apremilast, useful in the management of increased intraocular pressure or ocular hypertension or a symptom associated therewith.
- The advantages of the present invention could contribute a significant solution towards ocular hypertension therapeutics. The present invention has the ability to regulate availability of the formulation at the membrane surface without affecting the membrane barrier.
- The present composition can be formulated as eye drops, suspension and nanosuspension. It is a stable formulation and has no side-effects for topical administration.