4.1 OBJECTIVE

The proposed work is to development of aspasome containing skin whitening agent for efficient topical whitening activity of pharmaceutical system and to enhance its transdermal penetration, produce additive skin whitening and antioxidant effect in comparison to simple cream.

The aspasomal system is much more efficient at delivering low and high polar drug to the skin and also produce extra whitening effect.

Following are the objective for development of aspasome formulation.

- Elimination of existing skin pigmentation.
- Inhibition of new (or renewed) pigmentation by inhibiting melanin synthesis.
- Decrease existing dark skin color, Prevent tanning, Improve skin color homogeneity (reduce the symptoms of melasma/chloasma).

4.2 RATIONAL FOR USING ASPASOMES AS TOPICAL DRUG DELIVERY SYSTEM

Hydroquinone is a hydrophilic drug used for skin whitening purpose, its skin penetration is slow, less stable and produce side effect when it is in direct context to the skin hence we will enhance its penetration and provide stability and reduce its side effect with following rationales :-

- Aspasome Vesicles posses biological activity or with a targeting function in addition to carrier properties will have an added advantage.

- They are capable to suppress pigmentation of the skin and decomposition of melanin; it can be used to whiten the skin.

- They also improve elasticity of the skin by promoting the formation of collagen.

- They are more stable than ascorbic acid. Its lipophilic character is beneficial for its skin penetration.
The Vesicles prepared with amphiphiles having antioxidant property may have potential applications towards disorders implicated with reactive oxygen species.

They produce skin hydration effect and penetration through skin are easier.