CHAPTER I

INTRODUCTION AND REVIEW OF LITERATURES

I.1. INTRODUCTION :

The eye is a device by which the energy of light is converted into electric impulses which can traverse the optic nerve to the visual part in the brain. It is a transducer in the sense that it provides a mechanism by which light of wavelengths, in a critical range, can be received, focused, stored out, and then converted into chemical, thermal and electrical energy necessary to trigger nerve impulses propagation. In general, the energy carried by a nerve impulse is much greater than that of the light photon which trigger the propagation **(Borsellino, 1984)**. Thus a series of events must occur between the absorption of light and the beginning of nerve impulse propagation. The first of these events is a simple photochemical reaction which can be understood in relatively simple procedure, light falls on the eye cornea, passes on through the aqueous humor, the lens, the vitreous and then reaches the retina. In the retina, the photoreceptors, which are specialized to detect light have particular structure. This structure, developed in order to capture light photons, contains an absorbing pigment, the retinal or vitamin A. This absorbing molecule is functionally associated to an intrinsic membrane protein, an opsin, the pigment protein complex is the rhodopsin and by such association a chain of molecular events occurs, changing the