

“ANTIFUNGAL AND MOLECULAR ASPECT OF SELENIUM NANOPARTICLES”**Anil Kumar, S. R. Gayakwad, Dr. K. Khasdeo****Corresponding Author:** Centre for Nano-Sciences, Central University of Gujarat, Gandhinagar, Gujarat. Dept. of Biotechnology, VVM, Betul, MP, E-mail: kmr.nano@yahoo.com

In recently more cases become in daily news focused on fungus infections (Diseases) pose significant global health challenges, especially in view of the fact that the emergence of resistant dermitophyte (keratins) fungus and the adverse side effects associated with prolonged use continue to slow down the application of effective antifungal therapies. This makes imperative the need for the development of safe and potent alternatives to conventional antifungals drugs. In the present sequence of events and master plan on Nano scale materials have emerged as novel antifungal agents for the possibilities offered by their unique chemical and physical properties. Selenium nanoparticles have mainly been studied for their antimicrobial potential may be active against several types of Fungus. Selenium (Se) is an essential trace element, but is toxic at high concentrations. Its toxicity is related to the oxyanions selenate and selenite as they are water soluble and bioavailable, selenium against teratogenicity and cytotoxicity action of aflatoxin B1 and the inhibitory action of this element on the growth of fungi producing carcinogenic aflatoxins. Sodium selenate inhibited the growth of cultures of such fungi belonging to the classes, fungi imperfect as *Aspergillusflavus*, *Aspergillusfumigatus*, *Penicilliummeleagrinum* and *Penicilliumrougolosum*, its known as reach selenocystein amino acid (21). The use of nonmetal nanoparticles provides an interesting opportunity for novel antifungals therapies. Since nonmetals may attack a broad range of targets in the fungus there is a lower possibility to develop

resistance as compared to conventional antifungals. The present study focuses on the development of methods for the production of selenium nanoparticles and on their use as antifungus therapeutics against pathogenic dermitophyte (keratins) fungus