

A STUDY OF NOVEL GREEN NANO FORMULATIONS, NANOCONJUGATES & NANO-DRUG CONJUGATES AGAINST HIV, ASSOCIATED CANCER & OPPORTUNISTIC INFECTIONS

Globally, HIV/AIDS is a major public health issue. Nearly 38 million people are infected with this disease worldwide. 17 million people living with HIV are receiving medication called antiretroviral therapy (ART) in the quest to treat HIV. India has the third largest HIV epidemic in the world, with 2.1 million HIV infected persons. Currently available antiretroviral therapy (ART) has a number of impediments. The need for long term usage of antiretroviral drugs is associated with the problems of drug resistance, high cost, and other side effects. Due to the Immuno compromised condition, nearly 20% of HIV patients are prone to associated co-infections such as Cervical cancer, Kaposi's sarcoma or Non-Hodgkin's lymphoma & opportunistic infections like tuberculosis. In some cases, these secondary infections lead to death of people with AIDS. Hence, there is a constant urge for the development of novel drugs to combat the disease. The synthesis of nanoparticles is of great interest because of their wide applications in diverse fields.

In contrast to chemical synthesis, green synthesis is inexpensive and safe towards environment. The present study was a novel attempt to synthesize nanocompounds that incorporate the medicinal properties of plants that are known to have anti-HIV /anticancer properties such that the nanoparticles possess the attributes of a nanomaterial in conjugation with the phytoactivity.