8. CONCLUSION

Indians are no strangers to the multiple uses of Turmeric (*Curcuma longa* L.). It is used in cooking as a spice for over 2,500 years. In both traditional Chinese Medicine and Ayurvedic medicine turmeric is used in healing as an herbal remedy for a myriad of ailments, including indigestion, skin infections and wounds. Curcumin is the active substance in turmeric, has antiviral properties that may be effective against warts caused by human papillomavirus. It is currently being evaluated for its anti-carcinogenic and anti-mutagenic properties. In Indian tradition system women uses turmeric paste for applying in skin and it is believed that it prevents skin from infections including viral infections. Curcumin may act as anticancer activity for cervical cancer caused by HPV but drug resistance to cancer is the major impediment in cancer chemotherapy. The present studies suggest that curcumin can act as MDR modulator and can be considered as a promising lead compound for the design of more efficient and effective MDR modulators. Curcumin is the most active and potent inhibitor of MDR -1 gene expression *in vitro*. Treatment of co-incubation of curcumin with doxorubicin in KBChR8-5 cells has increased the sensitivity of doxorubicin resulted in consistent increase in apoptotic cells followed by cell cycle arrest. Co-incubation of curcumin may block MDR-1 gene expression which leads to increased cytotoxic effect by doxorubicin. Our results suggest that curcumin has the most potential as a non-toxic, effective chemosensitizer to be used in combination with conventional chemotherapy for circumventing MDR in cervical cancer.