Conclusions

*Candida* albicans is a part of the normal microbiota of humans, which enables contact with most medical devices and host surfaces, permitting formation of biofilms which is a major clinical problem of immunocompromised patients. Moreover, the number of available antifungals are very limited therefore new and effective antifungals are urgently needed. Based on this study, we have reported repositioning of cancer drugs as anti-biofilm agents in *C. albicans*. It is hypothesised that patients under chemotherapy with the above studied drugs may not require additional administration of anti-biofilm antibiotics, since most of the widely used anticancer drugs are good inhibitors of biofilms of *C. albicans* at various stages of development. The anticancer drugs could be of use for topical application, specially in the case of esophageal candidasis and skin cancer. In addition, the cancer drugs may function as developing novel anti *C. albicans* agents. The anti cancer drugs could be dual purpose agents targeting both cancer growth as well as *C. albicans* biofilm. Toxicity of the drugs were tested using human erythrocytes. Most of the drugs were non hemolytic in this study. The efficacy of doxorubicin and phytochemical combinations against growth and biofilm formation of *C. albicans* was tested. The synergistic combinations of doxorubicin- β ionone and doxorubicin - camphene possess potent inhibitory activity against growth and biofilm forms of *C. albicans*. Main thrust of this work is to reduce the dosages of doxorubicin as well reduce the threat of toxicities. The use of doxorubicin and phytochemicals indicate a promising strategy against drug resistant biofilm formation of *C. albicans*. Our antioxidant combination study show the efficacy of doxorubicin and antioxidants combination against planktonic growth and biofilm formation. The synergistic combinations of doxorubicin-curcumin , Doxorubicin –Ascorbic acid possess potent inhibitory activity against growth and biofilm forms of *C. albicans*. These combinations reduce the dosages of doxorubicin against planktonic growth and biofilm formation *C. albicans*. Further, studies are needed to test its inhibitory activity in vivo.