

Abstract

DNA/RNA intercalating agents are compounds with capability to insert themselves between nucleic acid base pairs. This phenomenon is accompanied by structural or functional disruption of said nucleic acid. Some of these compounds are used as therapeutics for cancer, bacterial or parasitic infection or are used as antivirals. This work summarizes different mechanisms which are responsible for antiviral effects of three significant classes of intercalating agents, acridine derivatives, quinolines and quinolones. Except for intercalation into nucleic acids, these compounds are also capable of alkalization of cellular organelles, inhibition of some viral enzymes (helicase, integrase) and immunomodulation. These abilities enable them to disrupt viral life cycle.