3. Scope of the present study

Most cervical carcinomas express high-risk human papilloma virus (HPVs) - E6 and E7 proteins, which neutralize the cellular tumor suppressor function. Studies on the effects of natural compounds on various cancer cell lines and animal models vis-à-vis molecular mechanism underlying the anticancer effect through the repression of HPV E6 and E7 is limited. Such an repression would mobilize the cell cycle pathways in an orderly fashion to deliver growth inhibitory signals to the cells. The present study was aimed to determine the oncoprotein regulation in cervical cancer, in silico inhibition through docking studies and to find out the mechanism of anthocyanidin - idaein chloride action on HPV positive cell lines with the following important objectives:

1. To study the prevalence of different types of Human Papilloma Virus (HPV) from the clinical cancer tissues.

2. In silico docking analysis of ‘Idaein chloride’ binding efficiency with viral oncoproteins and investigation of antioxidant properties of idaein chloride.

3. To evaluate the anticancer potential of idaein chloride on the HPV 16 & 18 positive cell lines.

4. To evaluate the effects of idaein chloride on cervical cancer covering different grade cell lines.

The thesis comprises of 7 chapters. The background information of the current topic - general introduction, the review of literature and research approach are given in the chapters, 1-3. Chapters: 4-7 incorporate the topics of HPV types of cancer tissues, docking analysis of idaein chloride vis-à-vis viral protein inhibition and idaein chloride effects on HPV positive cell lines & different grades of cell lines. Finally, the summary of the study and list of references are provided.