**Abstract**

Colorectal cancer, CRC, is a cancer of the colon and/or the rectum and is often detected at advanced stages. It most commonly progresses through the Chromosomal Instability Pathway, CIN, characterized by a cytosolic accumulation of β-Catenin. Current treatment strategies include the usage of expensive chemotherapeutics, such as 5-fluorouracil, that lead to severe side-effects. Simvastatin and Ethyl Acetate Extract of *Annona muricata* leaves, EEAM, have demonstrated promising cytotoxicity when used against cancer cells. This indicates they could be used in combination as a more economical and accessible way to manage CRC. This study investigated the single and combinatorial effects of Simvastatin and EEAM through *in-vitro* studies using HT-29 cells as a model for CRC by conducting MTS assay to assess cell viability following treatment. Further, *in-silico* blind molecular docking of Simvastatin and cytotoxic compounds of EEAM was performed with β-Catenin to understand the type of interactions Simvastatin and EEAM have with CRC. It was found that both Simvastatin and EEAM can reduce cell viability when given in single treatments, although further tests need to be done to confirm this statistically. Additionally, through molecular docking, it was found that Simvastatin and various cytotoxic compounds of EEAM bind the amino acid residues of β-catenin.

Key Words: *Colorectal cancer, simvastatin, EEAM, β-Catenin, molecular docking, cell viability, drug combination*