

## ABSTRACT

Colorectal cancer (CRC), also known as colorectal adenocarcinoma, is a heterogeneous disease of the colon and/or rectum. In Indonesia, CRC is the fourth highest incidence, constituting about 8.6% of all cancer-related cases, with about thirty thousand new cases and causing around sixteen thousand deaths every year. Thus, CRC is considered as one of the major public health issues in Indonesia. Numerous studies have shown the benefits of using simvastatin and *Annona muricata* leaf extract, such as promoting anti-proliferative and pro-apoptotic effects in CRC cell lines. In this systematic review, the author synthesized published studies on the effect of simvastatin and *A. muricata* leaf extract in CRC cell lines, CRC animal models, and CRC patients. In addition, the author highlighted the potential of simvastatin and *A. muricata* leaf extract to be used in combination with other anticancer treatments. Systematic review was written in accordance to PRISMA and using PICOS to form the research question. The author managed to synthesise published studies on the individual effects of simvastatin and *A. muricata* leaf extract on CRC cells, and highlight the potential of using simvastatin and *A. muricata* leaf extract in combination treatments. However, current experimental evidence is not sufficient to determine the specific mechanisms on how simvastatin and *A. muricata* leaf extract induce anticancer effects against CRC cells.

**Keywords:** *Colorectal cancer; simvastatin; A. muricata leaf extract; anticancer effects; combination therapy*