

A review on the effects of prebiotics on cell toxicity and integrity

ABSTRACT

Prebiotics are known as the ‘food’ for beneficial gut microbiota that are capable of promoting host health. Their effects depend on the product of gut fermentation or metabolites. This paper discusses the role of prebiotics on cytotoxicity, genotoxicity, and cell integrity. Metabolites produced from the fermentation of prebiotics can be used to understand gut diseases such as colorectal cancer. Fecal water from in vivo or in vitro studies can be used to understand the relationship between prebiotics and gut diseases because of its close contact with colon epithelium. Besides, fecal water has compounds that are capable of modifying colonocytes.

Keyword: Beneficial microbes; Cell integrity; Cytotoxicity; Fecal water; Genotoxicity; Prebiotics; Probiotics