



## The Mechanism of Action of Food Components in Disease Prevention 2020

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Deadline for manuscript  
submissions:  
**closed (31 March 2022)**

### Message from the Guest Editor

Chronic diseases continue to increase despite increased nutrition awareness. A diet enriched in fruits, vegetables is known to reduce the incidences of chronic diseases. Diet is a major source for several essential molecules in conjunction with antioxidant enzymes, providing protection from deleterious reactive oxygen species (ROS). However, a detailed understanding on the mechanism of action of nutraceuticals leading to disease prevention is needed.

Inflammation is recognized as the initiation point for several forms of cancer and chronic diseases. Diet- and lifestyle-related risk factors are risk factors for cancer. The activation of major inflammatory pathways involving Nf-kB, STAT3, etc., is associated with most cancers. In addition to the modulation of inflammation-related cytokine signaling and gene expression, nutraceuticals act through epigenetic mechanisms.

Thus, dietary antioxidants are compelling candidates for use as nutraceuticals in order to enhance the function of the antioxidant defense system during normal living conditions, thus preventing inflammation and decreasing the chances of developing chronic diseases.





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