

2015 年臺灣國際科學展覽會 優勝作品專輯

作品編號	090022
參展科別	醫學與健康科學
作品名稱	Antiviral Therapy for Hepatitis C Virus (HCV): Black Mustard Seeds
得獎獎項	三等獎

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Abstract

Hepatitis C Virus (HCV) is an RNA virus, which is considered the main cause of progressive chronic liver disease, cirrhosis, and hepatocellular carcinoma (HCC) worldwide. The number of the patients who are infected with this sleeping virus is increasing rapidly every year, as the unsuitability of the current therapy – interferon α and ribavirin – for most of the genotypes is the main cause of these high rates. Hence, the recent researches are focusing on finding out a new immunotherapy to affect this virus. In this research work, Black Mustard (*Brassica nigra*) has been used as powdered spice samples to prepare aqueous extracts; One of the included phytochemicals in the black mustard; glucosinolates and their hydrolysis products, was proposed to be used for the HCV patients to prevent the virus progression. Also, the Isothiocyanates are shown with chemotherapeutic and anti-tumor properties. Moreover, some of the structure-related isothiocyanates have the ability to induce the enzyme paraoxonase-1 (PON-1) that is considered hepato-protective agent against liver impairment, inflammation, fibrosis and liver disease mediated by monocyte chemoattractant protein-1 (MCP-1), and is thought to affect the entry of the virus into the hepatocytes. The effect of the black mustard and the produced myrosinase enzyme on the HCV RNA replication is still unknown.

In conclusion, the black mustard is thought to affect the progression and the fluidity of the HCV envelope resulting in impairment of viral binding and fusion.

【評語】 090022

To study the effect of Black Mustard extrats to prevent HCV virus progression. One of the compound do not has a heap-proteactive effect.

However, the data have detenial the effect of isolated compound to the virus.