World Academy of Science, Engineering and Technology
International Journal of Mathematical and Computational Sciences
Vol:14, No:12, 2020

Chemopreventive Potency of Medicinal and Eatable Plant, Gromwell Seed on in Vitro and in Vivo Carcinogenesis Systems

Authors : Harukuni Tokuda, Xu FengHao, Nobutaka Suzuki

Abstract : As part of an ongoing our projects to investigate the anti-tumor promoring properties (chemopreventive potency) of Gromwell seed, dry powder materials and its active compounds were carried out through useful test systems. Gromwell seed (Coix lachryma-jobi seed) (GS) is a grass crop that has long been used and played a role in traditional medicine as a nourishing food, and for the treatment of various aliments, paticularly cancer. The application of a new screening procedure which utilizes the synergistic effect of short-chain fatty acids and phorbol esters in enable rapid and easy detection of naturally occurring substances(anti-tumor promoters chemo-preventive agents) with inhibition of Epstein-Barr virus(EBV) activation, using human lymphblastoid cells. In addition, we have now extended these investigations to a new tumorigenesis model in which we initiated the tumors with DMBA intiation and promoted with 1.7 nmol of TPA in two-stage mouse skin test and other models. these results provide a basis for further development of these botanical supplements for human cancer chemoprevention and observations seem that this materials more extensively as one of the trials for the purpose of complementary and alternative medicine.

Keywords : chemoprevention, medicinal plant, mouse, carcinogenesis systems
Conference Title : ICSRD 2020 : International Conference on Scientific Research and Development
Conference Location : Chicago, United States
Conference Dates : December 12-13, 2020