

Taiwan scientists use mushrooms to fight cancer

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Singapore: Scientists at Academia Sinica have discovered that a crude extract (which the team named F3) of fucose-containing polysaccharides present in Reishi mushroom have the potential to activate the human immune system and fight against cancer. The results of the study have just been published in Proceedings of the National Academy of Sciences, US, (PNAS).

The research team of Genomic Research Center at Academia Sinica had earlier found that F3 could stimulate the growth of many different immunocytes and boost the activity of the nature killer cells.

In the present study, the team further demonstrated that F3, when injected in mice, could induce antibodies to recognize tumor-associated carbohydrate antigens on cancer cells and kill them. However, the scientists are yet to determine the detailed functional mechanism of F3.

The research was a collaborative effort by Dr Hsien-Yeh Hsu's group at National Yang-Ming University; Dr Chi-Huey Wong and Dr Chung-Yi Wu at the Genomics Research Center, Academia Sinica; Dr Kuo-I Lin's group at the Genomics Research Center and Dr Kay-Hooi Khoo (mass spectrometry analysis).

The first authors of the research paper, which is titled 'Immunization of fucose-containing polysaccharides from Reishi mushroom induces antibodies against tumor-associated Globo H-series epitopes', are Shih-Fen Liao of the Institute of Biochemical Sciences, National Taiwan University; and Dr Chi-Hui Liang of the Genomics Research Center, Academia Sinica. The research was supported by Academia Sinica and National Science Council.