【103-1 中國醫藥大學現代生物醫學講座】

Targeting tumor suppressor networks for therapeutic application

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Abstract

An attractive approach to developing new anticancer drugs is to target genes or proteins that are essential for tumor cell growth and survival. Tumor suppressors play an essential role in the development of cancer. During the past decades, elucidation of fundamental function of tumor suppressors and its networks allows us to further explore its potentials for therapeutic application. The prototypic tumor suppressor, RB, a key cell cycle regulator, will serve as an example for this purpose. In addition, RB interacting protein, Hec1, which is a mitotic regulator, and a BRCA interacting protein, Rad51, which is a DNA recombinase, emerge as interesting targets. We have identified and generated derivatives of small compound inhibitors targeting these pathways and demonstrated the efficacy of these compounds. Furthermore, we have identified that IL17RB pathway plays an essential role in pancreatic cancer metastasis and generated neutralizing antibodies against IL17RB for blocking pancreatic cancer metastasis. This illustrates the differential approach based on the targets toward therapeutic application for cancer treatment.