WWTF Project LS09-009

Searching for Cancer Achilles' Heels

Abstract

The genetic changes that lead to cancer are numerous and their constellation can vary dramatically between patients. Thanks to research over the past years an inventory of cancer genes is emerging and advances have been made to inhibit some of the mutated proteins. However, most defects are difficult or impossible to target and this approach is therefore limited to a subset of cases. From studies in model organisms it has long been appreciated that mutations make cells more vulnerable to specific conditions. Due to the mutation, cells are less capable of dealing with certain disturbances than healthy cells. Recent technical advances allow biologists for the first time to systematically identify cancer Achilles" heels in human cells. This project aims to find vulnerabilities that are specific for molecularly defined cancers. The identification of genotype-specific vulnerabilities will assist in the development of a new generation of patient-tailored therapies.

Keywords:

Cancer, synthetic lethality, RNAi, molecular mechanism

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Further links about the involved persons and regarding the project you can find at

https://archiv.wwtf.at/programmes/life_sciences/LS09-009