

Brain cancer breakthrough made by Australian researchers



A team from Australian National University (ANU) have made a breakthrough in understanding brain cancer, revealing that they have developed a tool to study how cells function in glioma, a type of brain tumor.

"We know cancer is a disease driven by the genetic alterations that take place in cells, triggered by causes such as exposure to radiation, continuous inflammation or ageing," study leader Eduardo Eyras said in a media release.

"The more we understand about how the cells transform during the development of glioma, the more options we could eventually have when it comes to developing new ways to treat this devastating disease."

"Glioma tumors are hard to cure since, by the time they become symptomatic, they are quite advanced in their course. Treatment is generally limited to radiotherapy and chemotherapy, but the tumor presents frequent resistance and relapse.

"Our results may help in the development of early markers for glioma and could be applied more broadly to other diseases with similar characteristics."

According to the Cure Brain Cancer Foundation, only two in 10 patients diagnosed with brain cancer survive for at least five years, and the five-year survival rate for brain cancer patients has increased by only 1 percent over the last 30 years.

Eyras and his team have found for the first time that there are gene isoforms in cancer that produce different proteins to normal cells.

"Gene isoforms are variations of a gene that can change the way the gene is expressed, or in other words, the way the genetic information is used," he said.

"It's a bit like if you give 10 different chefs the same recipe, they could end up preparing multiple variations of the same dish.

"These changes can be minor, or major. In the case of glioma, they're affecting a process that's essential for the maturation and function of brain cells."

source: xinhua

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