MedicalXpress

First drug target identified for children with rare type of brain tumor

July 13 2016

Primitive neuroectodermal tumors (PNETs) are the largest group of malignant brain tumors in children. They can arise from the brain's cerebellum or, more rarely, from tissue located throughout the central nervous system (CNS). Little is known about how CNS-PNETs develop, although these tumors are more aggressive than other PNETs and have an overall survival rate of only about 20 percent. In a new study, researchers for the first time have identified a possible target for a new CNS-PNET therapy.

The study was carried out by researchers from the University of Utah Huntsman Cancer Institute in Salt Lake City and the University of Toronto Hospital for Sick Children in Ontario, Canada. Using zebrafish, they developed the first animal model for the oligoneural subtype of CNS-PNET. A novel drug screening platform for zebrafish brain tumors was then designed to identify drugs that could eliminate brain tumors without affecting development of the normal brain. These studies showed that inhibiting the activity of the signaling protein MEK was essential for these tumors to grow. As these compounds are already approved for clinical trails in pediatric brain tumors, these findings suggest that drugs inhibiting MEK activity could offer a new therapy option for children with these devastating tumors.

Rodney Stewart will present this research on Saturday, July 16 from 3:15 - 3:30 p.m. during the Cancer symposium in Grand Ballroom 7B as part of The Allied Genetics Conference, Orlando World Center Marriott, Orlando, Florida.