Chin J Cancer. 2011 Mar;30(3):163-72.

Oncogene interactions are required for glioma development and progression as revealed by a tissue specific transgenic mouse model.

Moore LM, Holmes KM, Fuller GN, Zhang W.

Department of Pathology, the University of Texas M. D. Anderson Cancer Center, Houston, Texas 77030, USA. wzhang@mdanderson.org, gfuller@mdanderson.org.

Abstract

The aggressive and invasive nature of brain tumors has hampered progress in the design and implementation of efficacious therapies. The recent success of targeted therapies in other tumor types makes this an attractive area for research yet complicating matters is the ability of brain tumors to circumvent the targeted pathways to develop drug resistance. Effective therapies will likely need to target more than one signaling pathway or target multiple nodes within a given pathway. Key to identifying these targets is the elucidation of the driver and passenger molecules within these pathways. Animal models provide a useful tool with many advantages in the study of these pathways. These models provide a means to dissect the critical components of tumorigenesis, as well as serve as agents for preclinical testing. This review focuses on the use of the RCAS/tv-a mouse model of brain tumors and describes their unique ability to provide insight into the role of oncogene cooperation in tumor development and progression.

PMID: 21352693 [PubMed - in process] **Free Article**