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MicroRNAs and glioblastoma; the stem cell connection.

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Recent data draw close parallels between cancer, including glial brain tumors, and the biology of stem and progenitor cells. At the same time, it has become clear that one of the major roles that microRNAs play is in the regulation of stem cell biology, differentiation, and cell 'identity'. For example, microRNAs have been increasingly implicated in the regulation of neural differentiation. Interestingly, initial studies in the incurable brain tumor glioblastoma multiforme strongly suggest that microRNAs involved in neural development play a role in this disease. This encourages the idea that certain miRs allow continued tumor growth through the suppression of differentiation and the maintenance of the stem cell-like properties of tumor cells. These concepts will be explored in this article. *Cell Death and Differentiation* advance online publication, 12 June 2009; doi:10.1038/cdd.2009.71.

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