



A service of the [U.S. National Library of Medicine](#)
and the [National Institutes of Health](#)

Select **19262177**

1: [Cell Adh Migr.](#) 2009 Apr 22;3(2). [Epub ahead of print]

**LANDES
BIOSCIENCE**

Glioma angiogenesis: Towards novel RNA therapeutics.

[Würdinger T](#), [Tannous BA](#).

Molecular Neurogenetics Unit, Department of Neurology, Massachusetts General Hospital, USA; Center for Molecular Imaging Research, Department of Radiology, Massachusetts General Hospital, USA; Program in Neuroscience, Harvard Medical School, Boston, USA; Neuro-oncology Research Group, Cancer Center Amsterdam, Department of Neurosurgery, VU University Medical Center, the Netherlands.

Brain tumors exhibit marked and aberrant blood vessel formation indicating angiogenic endothelial cells as a potential target for brain tumor treatment. The brain tumor blood vessels are used for nutrient delivery, and possibly for cancer cell migration. The process of angiogenesis is complex and involves multiple players. The current angiogenesis inhibitors used in clinical trials mostly target single angiogenic proteins and so far show limited effects on tumor growth. Besides the conventional angiogenesis inhibitors, RNA-based inhibitors such as small-interfering RNAs (siRNAs) are being analyzed for their capacity to silence the message of proteins involved in neovascularization. More recently, a new family of non-coding RNAs, named angiomirs [microRNAs (miRNAs) involved in angiogenesis] has emerged. These small RNAs have the advantage over siRNAs in that they have the potential of silencing multiple messages at the same time and therefore they might become therapeutically relevant in a "one-hit multiple-target" context against brain tumor angiogenesis. In this review we will discuss the emerging technologies in anti-angiogenesis emphasizing on RNA-based therapeutics.

PMID: 19262177 [PubMed - as supplied by publisher]
