# Article information:

Tailored Lipoprotein‐Like miRNA Delivery Nanostructure Suppresses Glioma Stemness and Drug Resistance through Receptor‐Stimulated Macropinocytosis - Jiang - 2020 - Advanced Science - Wiley Online Library
<https://onlinelibrary.wiley.com/doi/10.1002/advs.201903290>

# Article summary:

1. Glioma initiating cells (GICs) are resistant to conventional chemotherapy, leading to poor prognosis.

2. Macropinocytosis is a critical metabolic adaptation in glioma and GICs, and can be induced by growth factors, chemokines, cytokines, and pathogens.

3. Three SDF1 mimic peptides were designed to evaluate the potency of CXCR4-stimulated macropinocytosis for GICs-targeting drug delivery.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article is generally reliable and trustworthy as it provides evidence for its claims through references to previous studies and research findings. The authors have also provided an extensive introduction that outlines the current state of glioma treatment and the need for novel strategies targeting GICs. Furthermore, the article presents a clear hypothesis that macropinocytosis could be used as a potential target for GICs-targeting drug delivery, which is supported by evidence from clinical samples and glioma cell lines showing overexpression of CXCR4 in GICs.

However, there are some potential biases in the article that should be noted. For example, the authors do not explore any counterarguments or alternative approaches to targeting GICs other than macropinocytosis. Additionally, while the authors provide evidence for their claims regarding CXCR4 expression in GICs, they do not provide any evidence for their claim that macropinocytosis is essential for glioma cells and GICs to acquire extracellular nutrition. Furthermore, while the authors discuss possible risks associated with their proposed approach such as toxicity or off-target effects of miRNA delivery nanostructures, they do not provide any data or evidence to support these claims.

In conclusion, while this article provides an interesting approach to targeting GICs using macropinocytosis-stimulating peptides, further research is needed to explore potential risks associated with this approach as well as alternative approaches to targeting GICs more effectively.

# Topics for further research:

* Alternative approaches to targeting GICs
* Risks associated with macropinocytosis-stimulating peptides
* Off-target effects of miRNA delivery nanostructures
* Clinical trials for glioma treatment
* CXCR4 expression in glioma cells
* Extracellular nutrition for glioma cells

# Report location:

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