

## Repurposing of tumor virus exosomes into anti-cancer agents

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Extracellular vesicles (EVs), or exosomes, play a pivotal role in tumor growth and metastasis. Gamma herpesviruses such as EBV and KSHV load viral proteins and viral miRNAs into tumor cell exosomes. By loading tumor derived EVs with chemotherapeutic drugs, we converted their pro-tumor/pro-angiogenic phenotype into an anti-tumor phenotype. Drug retention was facilitated by the presence of viral miRNAs inside the tumor EVs. By exploiting the targeting preferences of tumor derived EVs, chemotherapeutics can be directed to specifically poison the cells and the microenvironment that enables metastasis of viral cancers.