Patients with glioblastomas have a poor prognosis and new treatments paradigms are needed. The futility of current treatments lies in part on the difficulty of delivering therapeutic agents to the tumor. In this article, we review and discuss current knowledge of adjuvant treatment for glioblastomas including gene therapy and viral vectors. Additionally, this review provides an update on recent progress, which has focused on improving delivery methods including the development of new approaches such as stem cells. Particular emphasis is given to laboratory data showing the use of embryonic stem cells used as vectors to deliver pro-apoptotic genes to glioblastoma cells.