Roles of Nanotechnology in the Treatment of Glioblastomas and Neurological Disorders

Alain L Fymat

International Institute of Medicine & Science, USA

Abstract

One of the most promising applications of nanotechnology principles is in the treatment of glioblastomas and neurological disorders (Alzheimer's disease, Parkinson's disease, dementias, epilepsy, etc.). Here, specially-designed nanoparticles delivered by specially-designed nanocarriers are able to cross the blood-brain barrier to deliver their payload at pre-defined location(s) according to specified time- and dose-fractionations while remaining unnoticed by the immune system. I will discuss the several nanotechnologies utilized and their corresponding clinical advantages, including: nutshells (that can be targeted to bond to cancerous cells by conjugated antibodies or peptides to anopheles' surfaces); platelet-coated nanoparticles (that can deliver higher doses of medication drugs to targeted sites, thus greatly enhancing their therapeutic effects); biocompatible and biodegradable gelatin nanoparticles (that can deliver multiple drugs); and shape-shifting engineered nanoparticles (that can can be tailored to deliver drugs to specified tumors and nowhere else).

Biography

Alain L Fymat is a medical-physical scientist and an educator. He is the current President/CEO and Professor at the International Institute of Medicine and Science with a previous appointment as Executive Vice President, Chief Operating Officer and Professor at the Weil Institute of Critical Care Medicine. He was educated at the University of Paris-Sorbonne and the University of California at Los Angeles.