



Therapeutic efficacy study of novel 5-FU-loaded PMM 2.1.2-based microspheres on C6 glioma

Submitted by Laurent Lemaire on Mon, 12/01/2014 - 16:16

Titre	Therapeutic efficacy study of novel 5-FU-loaded PMM 2.1.2-based microspheres on C6 glioma
Type de publication	Article de revue
Auteur	Fournier, E [1], Passirani-Malleret, Catherine [2], Vonarbourg, Arnaud [3], Lemaire, Laurent [4], Colin, N [5], Sagodira, S [6], Menei, Philippe [7], Benoît, Jean-Pierre [8]
Editeur	Elsevier
Type	Article scientifique dans une revue à comité de lecture
Année	2003
Langue	Anglais
Date	2003
Pagination	31-5
Volume	268
Section	1-2
Titre de la revue	International Journal of Pharmaceutics
ISSN	0378-5173
Mots-clés	Animals [9], Antimetabolites, Antineoplastic [10], Drug Carriers [11], Drug Delivery Systems [12], Fluorouracil [13], Glioma [14], Malonates [15], Microspheres [16], Neoplasms, Experimental [17], Polyethylenes [18], Rats [19], Rats, Sprague-Dawley [20]
Résumé en anglais	The aim of this study was to evaluate the potential of poly(methylidene malonate 2.1.2) as a new drug delivery system to the central nervous system. 5-Fluorouracil microspheres were formulated by an emulsion-extraction method, and evaluated on a C6 glioma model. Twenty-seven Sprague-Dawley female rats underwent implantation of various C6 cell concentrations. Magnetic resonance imaging was performed at day 10 to control the setting of the tumor, by using a T2-weighted sequence. At day 12, 18 animals received blank or 5-FU-loaded microspheres, while 9 animals were not implanted and constituted the controls. Thereafter, MRI was performed twice a week to follow the tumor growth. In 12 animals, an alloimmune rejection of the tumor was observed, showing the limitations of the C6 glioma model. When tumor developed, no relationship was observed between the number of C6 cells injected and the tumor volume. 5-FU microsphere efficacy could statistically be demonstrated by significantly improving the median survival of C6 glioma-bearing animals and also by decreasing tumor burden.
URL de la notice	http://okina.univ-angers.fr/publications/ua5697 [21]
Autre titre	Int J Pharm
Identifiant (ID)	14643974 [22]
PubMed	

Liens

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