



Tipo	Periódico
Título	Biodistribution and Pharmacokinetics of Amblyomin-X, a Novel Antitumour Protein Drug in Healthy Mice
Autores	Pamela Boufleur, Juliana Mozer Sciani, Mauricio Goldfeder, Fernanda Faria, Vânia Branco, Ana Marisa Chudzinski-Tavassi
Autor (es) USF	Juliana Mozer Sciani
Autores Internacionais	
Programa/Curso (s)	Programa Pós-Graduação Stricto Sensu em Ciências da Saúde
DOI	10.1007/s13318-018-0500-z
Assunto (palavras chaves)	Amblyomin-X, antitumor protein, pharmacokinetics
Idioma	Inglês
Fonte	Título do periódico: European Journal Of Drug Metabolism And Pharmacokinetics ISSN: 0378-7966 Volume/Número/Paginação/Ano: v. 44, p. 111-120, 2019
Data da publicação	21 August 2018
Formato da produção	Digital https://doi.org/10.1007/s13318-018-0500-z
Resumo	<p>Background: Amblyomin-X is a recombinant protein under development for cancer treatment owing to its selective cytotoxic activity over several tumour cell lines and tumour regression in mice models. The aim of this study was to examine the distribution and pharmacokinetics of amblyomin-X in healthy female mice.</p> <p>Methods: Amblyomin-X was injected intravenously into the healthy animals and at controlled times plasma and organs were removed and analysed for identification and quantification of the protein. Alternatively, the labelled protein was injected into mice and tracked in an in vivo imaging system.</p> <p>Results: Amblyomin-X was rapidly eliminated from plasma, probably because of its inability to bind to plasma albumin. After 10 min, the protein was found in the thymus and lungs, and later in the heart, liver and kidneys. In the liver, the protein was found until 24 h after a single injection. The in vivo analysis showed the same kinetics profile, besides the identification of amblyomin-X in the bladder region, indicating its elimination via urine. Only fragments of amblyomin-X were observed in the urine.</p> <p>Conclusions: These findings suggest that amblyomin-X is rapidly distributed to the tissues, metabolized by the liver or even kidneys, and eliminated in urine in healthy mice. There is no accumulation in any organ.</p>
Fomento	Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP); Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq); Banco Nacional de Desenvolvimento Econômico e Social (BNDES)